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JOURNAL

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No. 1.

Agathiyan and Tamil Literature

By

S. S. BHARATI

(Annamalai University)

So many and diverse are the myths associated with the name of Agathiyan in Tamil Literature, that it is now exceedingly difficult if not impossible to discover whether any and what warrant exists to postulate a historic background for all or any of them. Legends, unrelated in their origin and irreconcilable in their history, have now for ages been so indiscriminately interwoven by a legion of writers that the amalgam, even under the great weight of volume and with the concretion of time, retains and betrays the tell-tale traits of a hotch-potch. Writers have vied with each other to seize and improve upon tales of different ages and diverse cultures to present a progenitor for the hierarchy of Tamil authors, so hoary that now every flower and fruit in every branch of the tree of literature is pompously given a pedigree tracing it to the magic seed-bed of the fertile and versatile mind of this mystic personage lost in the hazy but fascinating fairy-land of mythology.

Recently some research scholars have started the hunt, and are turning the glare and searchlight of modern criticism on these tales with a view to unravel this labyrinth of 'Agasthiya' myth; and they are now deftly threading their devious turns to run this fairy fox down in his mystic hole.

Subjected to a strictly logico-historical electrolysis, if I may use such a phrase, this age-long mythopoeic compound resolves into a

three-fold spectral complex mytho-groups, each suggesting that it should be an exaggerated and refracted variant of the other:—viz (i) there is first the sheaf of 'Agasthiya' legends in the Aryan or Sanskrit literature of the Trans-Vindhyan origin; (ii) there is then the agglom of 'Agathiyar' myths of the Tamil literature; (iii) and there is also the transmarine clump of Agasthiyan legends of the Indonesian and Indochina folk-lore and literature. Not one of these three is elemental or unitary; they all offer self-suggestive indications that each is an ill-assorted fossilised cluster betraying its incongruous and clumsy admixture.

Taking the last as first, the Malayan and Javanese legend-groups current in both the peninsular and archipelagic regions may at once be summarily disposed of as calling for no special attention for purposes of our investigation here. They bear on their very face the impress of their foreign origin. They are not the indigenous products of those parts. They bear their self-revealing label of adulteration and admixture of two sets of imported legends, unequivocally proving their twofold foreign factories, Aryan and Tamilian. They offer nothing original or intricate worthy of inquiry, and can add nothing of value to the study of these legends in their original manufacturing in the North Aryan and the Southern Tamil regions of our Indian Sub-Continent. We may therefore pass them over without any detriment to the purpose of this thesis, and proceed to the next group.

In the Sanskrit Literature we trace three or more personages of the name of Agasthiya, each related or referred to in different books of different ages. There is the oldest Pre-Valmiki Agasthiya of the Vedic Aryan clans eulogised and immortalised in the Rig Veda, which speaks of this powerful clan-leader and of his patrician spouse Lopamudra among the pioneers of the early Aryan enterprise in the Gangetic valleys. We next hear of two or more Agasthiyas in the epic age. Even the Ramayana of Valmiki mentions two distinct Agasthiyas as residing respectively at two separate far-off places. The first is the elder brother of Sudarsana Maharishi and veteran leader of the hardy daring Aryan colonists bravely pushing forward into the wild country south of the Vindhya mountains. He was captaining the vanguard of this pioneering hermit order of Templars then entrenched in their southernmost outpost a little to the north of Panchavati or the modern Nasik in the north-western valley above the Narmadha and crusading against the non-Aryan native tribes of those uncivilised wilds. He welcomes Rama in his aimless jungle wanderings, persuades him to forsake his

peaceful role of penance and pilgrimage, and incites him to fight and exterminate the troublesome militant tribal chiefs who have been hostile and unaccommodating to the advancing Aryan settlers in those regions. This great fighting Rishi is eulogised by Valmiki in superb language of poetry glowing with all the warmth and admiration of a great Aryan poet for the valiant Knight Templar who championed, promoted and advanced the cause of Aryan culture in far-off foreign fields. This is found in the Aranya Kandam of Valmiki, sargas 11 and 12.

We next hear of another Agasthiya in the Kishkinda Kandam of both Valmiki's and Kampan's Ramayanams as a peaceful learned hermit domiciled in the southern end of the far-flung spur of the Malaya hill near its dip into the southern sea. There is no mistaking this latter personage for the former Agasthiya near Panchavati. There is nothing in the meagre reference to this hermit of the Southern or Dravidian domicile even to suspect any possible identity of the latter one with the former. There is more than one canto in the Aranya Kandam in both the epics devoted in praise of the enterprise and activities, patriotic ardour and perfervid ritualistic Vedic religion of the Aryan Rishi in the northern jungles. But in the Kishkinda Kandam, there is but the barest and passing reference to his southern namesake, merely mentioning him as a montanic monk residing in one of the landmarks in the extreme southern edge of the civilised Pandian kingdom in Dravida or the Southern peninsula to be visited by the reconnoitering platoon of the simian army of Sugriva, sent to ransack the southern regions in search of Sita ravished by Ravana. The poet's language leaves no doubt whatever as to the different identity of these two men. Not only is there not the remotest hint or suggestion in the latter case that this southern hermit was an Aryan or was following and practising the Aryan religious rites. But there is also clear and positive indication that the poet does not want the readers to confuse these two names. As if to warn the readers against any possible surmising that the militant Aryan Agasthiya near the Panchavati might betake himself in some magic aerial conveyance to his own far-off sequestered Pothian ashram for rest and relaxation in the intervals of his strenuous campaigns in his northern camp, both Valmiki and Kampan emphasise in the most unequivocal language in each context that the two Agasthiyas, they were referring to, were permanent residents in their respective resorts:—one a veteran Templar with his staff engaged in battling or bivouacking amidst the non-Aryan tribes near Panchavati; and the other a mere recluse retiring to his mountain resort for restful repose and quiet contemplation in the midst of silence and solitude—Vide Valmiki's Ramayana, Aranya

Kandam, Sargas 11 and 12, and Kishkinda Kandam Sarga 41, and Kamba Ramayanam, Kishkinda Kandam, Nadavitta Patalam, stanza 31 :

“தென் தமிழ் நாட்டகன் பொதியிற்றிரு முனிவன் தமிழ்ச்சங்கஞ் சேர்கிறீரேல்
என்று மவனுதைவிடமா மாந்லாலம்மலையை யிடத்திட்டேகி”

Thus it is crystal clear for all fair-minded readers that Valmiki means, and mentions about, two separate Agasthiyars in the two regions separated by over twice-four hundred miles of wild and impenetrable forests. It is a moot question therefore as to whether the latter Agathiya in the southern Pothia home is also an Aryan vagrant ascetic of the same gothra or of the eponymous name as that of his northern namesake that drifted to and settled contentedly in the lone Pothia hills, averse to and away from all contact with the Pandian civilisation of which Valmiki speaks highly in the same context or whether he could be a Tamil seer and saint of the well-known ‘Ariwar’ order, whose fame had travelled far to the north-Aryan lands, and evoked an echo in the epic of Valmiki. It looks as if the latter hypothesis is more probable.

Let us pause till we probe the other Tamil counterpart of this Agasthiya legends. In the whole range of the earliest classics of the Sangam age, we meet with no name, saintly or secular, of any person by the name of Agathiyar. The reference in the 11th verse in *Paripadal* gives us no name whatever. It simply speaks of the star said to be named after the Pothyan-recluse. Yet this proves that even so early as at the time of Nallanthuvanar, the author of this verse and of *Neithalkali*, about two millenniums ago, the Tamils venerated the memory of some great personage whose name had already become a legend, sufficiently old for them to fancy he had become a star continuing to twinkle his blessings on his race yet living on earth. What interests us here is that this stellar saint is spoken of as the hermit that once had his home in the Pandiyan’s Pothiya hills. That therefore the early Tamils even of the third Sangam age believed in some personage of pre-classic age of the order of Ariwars or seers, known to and frequently spoken of in all classics of the Sangam period, is thus fairly well established. That he should have earned great fame, and left a great name to be remembered and revered in the Tamil country, is also clear. Otherwise he could not have been thus canonized in *Paripadal*. That his should also have been a great name among the literary stars of the pre-classic age, and that he should have contributed no small share by his literary activities in stabilising and standardising the Tamil grammar and literature are also obvious

from the fact that unbroken traditions in *Tamilaham* make him the unquestioned patriarch of the literary hierarchy in *Tamilaham*. If his name and fame should have crystallised into a hoary legend by the age of *Kalithogai* and *Paripadal* 2,000 years ago, he should have lived and laboured for Tamil, centuries before the 3rd Sangam Sun began to set. Tholkappiar nowhere makes mention of this Tamil savant specifically of course. But that in itself will not suffice to negative the existence of a pre-Tholkappian Leviathan of Tamil literature. For, Tholkappiar does not claim to be the father of Tamil Grammar himself. He expressly and frequently speaks of a galaxy of literati, who set standards for him both in poetry and grammar—*Ilakkiam* and *Ilakkanam*. On the other hand the strange absence of any reference to any Agasthiya in his standard work significantly suggests that the later hazy myth connecting Tholkappiar and Agasthiyar as master and student has no valid warrant whatever in fact. It is not probable or natural to expect such ingratitude or insolent discourtesy in the author of the great Tamil grammar deliberately to consign his far-famed master to oblivion. Even were the foolish unnatural story of the bickerings between the master and his pupils taken as adequately accounting for his ignoring his great guru, his contemporary co-students like Panamparar have no such reason or justification to share Tholkappiar's guilt and conspiracy to filch their illustrious master of his fair fame. They dared not and could not hope to banish his memory from *Tamilaham*. If there were any the least truth in this story of the legendary father of Tamil grammar being a contemporary and teacher to Tholkappiar and his collegiate colleagues, surely they should have felt it their proudest privilege to glory in their discipleship under such a master, and would have been loudest in chanting his praise in all their works as adding lustre thereto. I am therefore of opinion that the Pothian sage, sung by Nallanthuvanar in *Paripadal* was not a contemporary, but lived and died before Tholkappiar; that his name must have become a legend to the literati of his age. Probably this pre-classic patriarch of Tamil Vyakarnins was not an Aryan at all. He lived too far away in the remote past to admit of his being a solitary Aryan adventurer settling down in a sequestered nook of the Tamil Parnassus after braving the impenetrable interminable wildernesses intervening between the northern Aryavārtha beyond the Vindhya and the civilised *Tamilaham* in extreme south of the Indian continent. He must have been a great scholar on all accounts. If he swam across the wild forests infested by tribes as savage as the beasts that were prowling there and reached at last a land whose civilisation caught his own fancy and the admiration of the greatest and earliest Aryan epic poet, and if he also fell in such love with the language and literature of the new land he

came into that he set himself to learn enough of it to become a master-grammarian in that new language, is it natural or probable that he thereafter grew such a cynic and misanthropist as to seek a voluntary banishment from all contact with civilisation in that land and preferred to vegetate in the lonely forests of Pothia Hills in the only company of roving wild beasts roaring to the echo of the torrential cascades of jungle-streams ? No ; this cannot be. The truth must be this mythical Tamil grammarian, if ever he were a human personality, was the tallest among Tamil poppies of a remote past. And he left a name too great to be forgotten, and so beloved as to serve as a nucleus for many a myth to be woven around it by his fond and admiring posterity. The accretions of legends around his name grew thick and fast, and shrouded the memory of the original hero in successive layers of different density and differing hues that it is now very difficult, if not impossible, to penetrate the crust and see the kernel in its reality. We can at this distant time only inductively infer all about this pre-classic Leviathan, even whose fossilized skeleton is sunk so deep down in dark distance as now to be visualised only through the dim and refractory glimmer of the cavernous past.

I now seek leave to offer my suggestion. I am well aware it cannot be now more than a mere suggestion, to be worked out by future fuller research. There was perhaps in the pre-classic Tamilaham, long before the Aryan contact, a hoary sage and savant by the name of 'Agathiyan,' a name unconnected with the Sanskrit 'Agasthiya.' He was of the order of 'Ariwar' or seers, so well-known and revered in all the early Tamil classics. His life and labours left a sweet memory embalmed by later legends and enshrined in later literary works in Tamilaham. The post-Tholkappian miracle-mongering credulity loved to weave around this hoary name many a legend that tickled its vanity or pandered to its new-fangled love for Aryanised lores. Metamorphosing Tamilian names into their fanciful Aryan mythical equivalents is a well-known process that started early and was long at work in Tamilaham. Familiar and significant instances are not wanting to clinch this truth. Who does not know how the Tamil 'Muruga' came to be installed as the 'Subramania,' and how the Tamilian 'Ayai' (ஐயை) was metamorphosed into the 'Durgai' and Parvathi in the Aryan pantheon ? Even 'mayon' and 'mal' are believed to be old pre-Aryan Tamil names, subsequently identified with the later Aryan Sungod, Vishnu. In the course of Aryanising Tamil culture in the post-Tholkappian Tamilaham, not only deities lost their Tamilian identity and got merged with some corresponding Aryan gods, but fertile ingenuity never spared itself in finding even for many a familiar name of Tamil lands, rivers

and persons, fancied Aryan correlatives, and in inventing elaborate heraldic pedigrees in high sounding Aryan phraseology. 'Ven-Kadu' or white forest is transformed into Svetaranyam; 'Tan-Porunai' becomes Tambraparni. The oldest Tamil dynasty of the 'Pandians' derivable from the Tamil root 'Pandai' (= 'old') is now linked with the Aryan 'Pandas'. Therefore, that the Tamil 'Agathiyan' also could easily be turned into the Sanskrit 'Agasthiya' need not tax our faith very considerably.

Either the story about Agathiya being the patriarch of the Tamil literati is altogether to be rejected as a deliberate concoction; or it is to be taken that there was some real warrant and factual background for this Agathiyan mythology in Tamilaham. With the available evidence and the long unbroken traditions in literature, it is rather more probable than otherwise that there lived some great savant at the dawn of the primeval history of Tamil literature to answer to the legend-hallowed hero of the Pothiyil hill. Otherwise the whole mythologic edifice would be only a castle in the air. And the entire Tamil race, both the lay mass and the cultured scholars of those early times, could not have accepted this gilt whistle, and apotheosized a mere Aryan Rishi as the father of the Tamil Literature. It is still more probable that he was a Tamilian, who adorned the Tamilaham with his wide erudition, and great talents, and high literary attainments in the hoary past long prior to the advent of the Aryan settlers in this part of the country. The memory of this pre-historic Leviathan lingered through successive generations of his admiring countrymen, gradually mellowing in colour, contour and perspective, till a neophyte fancy fertilized by the fresh Aryan contacts in the later Sangam age seized hold of it and richly inlaid and filigreed it with a mythopoeic extravagance, and with lavish but indiscriminate use of all and sundry Aryan anachronisms.

Inventive imagination, quickened by the new contact of the Aryan culture, set to work. The accidental phonetic approximation of the names of this ancient Tamil savant and of the Aryan hero, 'Agathiyan' and 'Agasthiya'—perhaps first attracted; and the very love for emblazoning the memory of their first great savant naturally hastened and helped to complete the process of Aryanising this Tamil patriarch. Except on some such hypothesis, it is impossible to understand or to reconcile diverse incidents and episodes ascribed to this hallowed name in Tamil literature. But once we light upon this natural phenomenon so common and frequent in the history of the later hybrid culture of Tamilaham, every puzzle in this tangle of Agathiyan legends easily solves itself; and a glimpse of the unadorned Tamilian background becomes available to the students of the history of Tamil literature.

Of course fond fancy did not rest content with the mere merging of this Tamilian savant with the Aryan Rishi of Panchavati fame. Once set rolling in this exciting and exhilarating game, the snow-ball was not slow in gathering accretions. It swelled thick and fast; and its strange fascination simply served to stifle criticism and to secure for it the admiring and unquestioning acceptance of the enfeebled and enslaved Tamil minds. Not only the Panchavati Agasthiya's story was blended with the traditional tale of the father of Tamil grammar; but all the incidents of all the legendary heroes with the name of 'Agasthiya' in the Aryan lores were freely and lavishly woven into the fabric of this new Agasthiyan mythology in its new southern home. The plebian anchorite of Pandinad was not only enthroned at Nasik near Panchavati; and hailed as Rama's epic-host; but he was also wived with Lopamudra, the patrician spouse of the Rig Vedic Aryan clan-leader. The modern lore of Agasthiyan myth is so artificial and thin-crustrated that it falls to pieces at every touch of reason and criticism. Even if the Aryan Rishi at Nasik frequently aeroplaned to the Pothiyan paradise and miraculously eked out his span of life to preside over the first two successive Tamil Sangams or Academies, how could he resuscitate and recover the departed Vedic soul of Lopamudra from the Aryan 'Valhalla' back to be his spouse in the Tamil Parnassus? The obvious truth must be that the tradition of the Tamil academician was already in the Tamil land, and served handily for the myth-mongers to work upon. It was greedily seized hold of by the imaginative and ingenious new Aryan settlers, and was lavishly decorated and re-dressed to the delectation of his fond but indiscriminate post-sangam posterity with a rehash of all and sundry legends they could lay hands on about all Aryan heroes named 'Agasthiya' in their Sanskrit lores—no matter when, where, or howsoever they lived and died. The only tenable inference could be that the original of all this mythic plethora of fantastic tales in the later Tamil literature was a simple human literary hero of pre-Aryan Tamilaham, lionised by his admiring primitive fellow-Tamils for his unparalleled erudition and wide scholarship. This is made more than probable by the existence of traditions about many a Tamil 'Agasthiyan' recorded in Tamil books, such as Muthoor Agasthiyan' in செங்கோன் தரைச்செலவு. And Muthoor was a place in the submerged Pandinad south of Comorin. Persistent and consistent traditions of this kind current in the whole Tamil country and in Tamil literature about this pioneer and precursor of Tamil scholarship postulate the truth of a pre-Aryan Tamil scholar of such or similar name. And possibly there were more persons than one named 'Agasthiyan' in early Tamilaham with some claim on the attention of posterity. Some one of them was the greatest; and his greatness attracted and wove round his name all the worthy incidents in the lives of his name-

sakes whose individualities were merged and lost in his halo in course of time, even as the many Aryan 'Agasthiyas' are indiscriminately mixed up in the later Sanskrit lores. And in the post-Sangam periods, the Aryan legends also combined with the integrated Tamil traditions still further to mystify and mythologise the story of this great Tamil savant. And now let us conclude this discussion with an attempt to study and reconstruct, if possible, some of the recorded statements in Tamil literature about this Tamil sage, which at present defy all sense or solution. Nachchinarkiniyar says as follows :—

“.....அவரும் (அகத்தியனாரும்) தென்றிசைக்கட் போதுகின்ற வர், கங்கையா ருழைச்சென்று காவிரியாரை வாங்கிக்கொண்டு, பின்னர் யமதக் கினியாருழைச்சென்று அவர் மகனார் திரணதாமாக்கினியாரை வாங்கிக்கொண்டு, புலத்தியனா ருழைச்சென்று அவருடன் பிறந்த குமரியார் உலோபாமுத்திரையாரை அவர் கொடுப்ப றீரேற்று இரீஇப் பெயர்ந்து, துவராபதிப் போந்து நிலங்கடந்த நெடுமுடியண்ணல் வழிக்கண் அரசர் பதினெண்மரையும் பதினென்கோடி வேளிருள்ளிட்டாரையும் அருவாளரையுங் கொண்டுபோந்து, காடு கெடுத்து நாடாங்கிப் பொதியின்கணிருந்து, இராவணனைக் கங்கருவத்தாற் பிணித்து இராக்கதரை ஆண்டு இயங்காமை விலக்கி.....”

Some of these later legends make this patriarch of Tamil literature not only an Aryan Rishi, but also makes him a pilgrim-father fetching a band of some chieftains and some surplus population of the Yadhava-clan from Lord Krishna's Dwaraka in the north. Nachchinarkiniyar, the great Brahman commentator of the medieval age, gives this sage also a victory in a musical contest with the ten-headed Rakshasa king, Ravana, of the southern Lanka. These statements require reconsideration in the light of the suggestion that this pioneer savant of pre-classical Tamilaham should have been a prehistoric native citizen of the southernmost Tamil kingdom. These statements of the great commentator, as they stand, simply refute one another. If this Agasthiya were a contemporary of Ravana, he should have lived in the second or Thretha Yuga ; and he could not possibly have gone to Dwaraka, which was built by Krishna of the Yadhava clan as his capital on the west coast for the first time only about the end of the third or Dwapara Yuga. If on the other hand he lived in Krishna's time, and peopled the southern Tamilaham with the unwanted clansmen of Krishna fetched from his new-found capital Dwaraka, surely he could have had nothing whatever to do with the famous Rama's rival, whose musical chants moved even the Lord of the Kailas Hill. Perhaps to avoid this obvious self-contradiction, the author of the Tamil brochure, called 'Velir-Varalaru,' naively suggests that the Ravana said to have been

defeated by Agasthya in a musical contest was not the king of Lanka slain by Rama, but must have been a later king of that name. This ingenious suggestion will be found to be of no avail, as elsewhere the legendary musical contest of Agasthya is associated only with the king of Lanka sung by Valmiki. Even apart from this, there is a still more fatal objection to this naive theory making Agasthya the captain and leader of the alleged Velir-immigrants from Dwaraka, who are said to be the forbears of all the later Tamil chieftains called in the Sangam classics as the munificent Velir-patrons of Tamil poets. Nachchinar-kiniyar in the same context avers that this Agasthya was also the contemporary of and master to the author of the most ancient extant classic Tamil grammar, known as Tholkappiam. This disciple of Agasthya is said to be no other than Thranathumagni, son of Jamathagni, and brother to Parasurama. And we know from Valmiki that Parasurama was far senior to Rama, and was ousted by the hero of Valmiki's epic. The author of Tholkappiam, being Parasurama's brother, must also have lived about that time of Parasurama and Rama, referred to in Valmiki's Ramayana. That would make it possible for this Thranathumagni's master Agasthya to meet Ravana, Rama's rival in the epic age. But for the same reason it would make it impossible for him to have gone to Krishna in Dwaraka on the alleged mission of fetching to Tamilaham the forefathers of the Tamil-Velirs. This whole legendary tangle thus bears on its very face its self-condemnation. A full one hundred millenniums form the interval between the times of Rama and Krishna. No human hero could live and span this gulf of time and achieve plaudits for his great deeds both as the host of Rama near the modern Nasik, as the vanquisher of Rama's enemy, Ravana, by his musical attainments, and also as the voluntary leader of the Yadhava colonists from Dwaraka in Krishna's time in the far-off southern Tamil country in the age of Mahabaratha wars at the fag-end of the third Yugam. These self-contradictory fictions are thus only to be stated to be rejected as baseless fabrications of unthinking, if not reckless, myth-mongers in the post-sangam Tamilaham.

The question arises therefore as to whether Agasthiyar believed to be the pioneer in the field of Tamil scholarship, had anything whatever to do with the Pothia hills, if he were at all a historical personage in the pre-classical times. Here again it is plausible to hold that he might have settled down at the foot of the Pothia hills, and made all his fame as the most erudite scholar of his times by his incessant labour of love in promoting Tamil learning and culture. It is also probable that he was not originally a native of the woodlands of this famous hill, but came and settled there with an admiring band of Velir-youths romantically attach-

ed to him for his great Tamil learning. Nachchinarkiniyar must have heard some such legends about this migration and settlement of Agathiyar finally in the Pothia hills. But it is very probable that such legends as he heard and recorded in his commentary on the payiram of Tholkappiam came to him very much refracted by time and by reckless reports of unauthenticated traditions. Some phrases in the passages of Nachchinarkiniyar significantly suggest that the migration of the Tamil Agathiyar and his Velir-companions must be from somewhere south of Pothia hills, and not from the far-off northern Dwaraka. The commentator takes the words Nilam-Kadantha-Nedumudi-Annal (நிலங்கடந்த நெடுமுடி யண்ணல்) as referring only to Krishna, and the word Thuvrapathi (துவராபதி) as Krishna's capital Dwaraka. It is possible Nachchinarkiniyar heard of legends which suggested that this Agathiyar fetched his Velir-companions from a place then called துவராபதி with the sanction or encouragement of a sovereign described as நிலங்கடந்த நெடுமுடி யண்ணல். It is equally possible that our commentator believed these words as referring to, and therefore attributed them to, the Yadhava king of Dwaraka. He makes the same mistake in interpreting a similar passage in Maduraikanchi மதுரைக்காஞ்சி, (to wit) Nilam-tharu-thiruvil-nediyon நிலம் தருதிருவில் நெடியோன் as referring to Vishnu or Krishna. The author of Maithuraikanchi (மதுரைக்காஞ்சி) undoubtedly means by the latter phrase to indicate only the great Pandian king, who earned his great fame by his honoured connection with a great Tamil Sangam or academy he maintained in his own capital. Vidwan R. Raghava Ayyangar, Lecturer in the Research Branch of the Tamil Department of the Annamalai University, also interprets this passage of Mangudi Maruthanar (மாங்குடி மருதஞர்) in Mathuraikanchi (மதுரைக்காஞ்சி) as referring only to the great Pandian king, and not to Vishnu or Krishna as Nachchinarkiniyar would take it to be. It is very useful in this connection also to remember that the great Pandian king, in whose court Tholkappiam is said to have received the Sangam imprimatur for his classical grammar, was known as Nilantharu-Thiruvir-Pandian (நிலந் தருதிருவிற பாண்டியன்) (Vide Panambarar's Preface to Tholkappiam).

There were several places known by the name of Thuvurai in the Tamil country. Some such places were also existent in the old sea-swallowed Pandinad, south of the modern Cape Comorin. There was also 'Kapatapuram' the capital of the Pandian kings, and seat of the second sangam in the southern Pandian kingdom lost in the deluge; and 'Kapatapuram' taken to be a Sanskrit name by later post-sangam Aryan scholars might easily have been rendered into Dwarapathy or Thuvrapathy (துவராபதி) as fair equivalent in Tamil of the supposed Sanskrit

name of the second Pandian capital. This possibility becomes a probability when we connect it with the recorded fact of destructive deluges engulfing vast territories of the Pandian kingdom, and of the Pandian king and his surviving citizen—followers migrating northward and settling down in the part of the Tamil country immediately north of Comorin and adjacent to the famous Pothia or Malaya hills (Vide Stanza No. 4 of Mullaikkali). Now putting two and two together, one may hazard the suggestion that the patriarch of Tamil literature, 'Agathiyar', might have migrated from the prediluvial Pandinad, might have visited the great Pandian capital Kapatapuram which was later rechristened as Thuvarepathy (துவரபதி) and might have taken some adventurous Velir-chieftains attached to the court of the then Pandian king described as Nilam katantha Nedumudi Annal (நிலங்கடந்த நெடுமுடியண்ணல்). The words Nediyan (நெடியோன்) and Nedumudi Annal (நெடுமுடியண்ணல்) may all mean the great Pandian king. Journeying northward, Agathiyar and his companions reached the foot of the Pothia hills, cleared the forests, and erected their cabin houses and settled there for good, charmed by their most picturesque and enchanting environments near the source of the classical river Porunai (பொருறை) of the Pandias now known as Thambara-parani, and making this montane-villa their permanent home from where they irradiated the fame and glory of Agathiyar's great erudition and scholarship in that primitive age. The fastnesses of the Pothia hills, before the advent of this adventurous band under the leadership of Agathiyar, would have been inaccessible to the ordinary inhabitants of the Tamil districts surrounding those hills and infested only by the denizens of the wilds. Gradually Agathiyar's companion-Velirs or chieftains should have dispersed themselves from this hill-dwelling of Agathiyar into the adjacent forest—countries and founded petty principalities. For, we hear from the Sangam classics that a Velir chieftain of the house of Ay was ruling over the tract of land almost close to where Agathiyar is said to have lived in the Pothia hills. We also hear of another Velir dynasty known as 'Avis' ruling over a small territory from a hill capital known by the name of that princely house, to wit, Avinankudi (ஆவினக்குடி) now known as 'Palani' in the Palani hills.

Chronologically, if this Agathiyar were a contemporary of the king Nilantharu-Thiruvirpandian or Nilam-Kadantha-Nedumudi-Annal (நிலந் தருதிருவிற் பாண்டியன் or நிலங்கடந்த நெடுமுடி யண்ணல்) of Kapatapuram or Thuvarepathy (துவரபதி), there would be nothing anachronistic in associating him with the author of Tholkappiam as master and disciple. For, as already mentioned above, Tholkappiam is said to have been introduced to the Sangam scholars only in the court of this

Pandian king. Nevertheless I am not inclined to accept this legendary relationship between Agathiyar and Tholkappiar as master and disciple for the reasons I have already discussed and set forth in the earlier paragraphs of this paper. I believe that Agathiyar had nothing whatever to do with Tholkappiar and his colleagues like Panamparar ; because these latter group of scholars make no mention of or reference to Agathiyar in any of their works, which we should expect them to do if they were themselves the pupils of this Agathiyar. It is very probable that Agathiyar was a senior scholar of pure Tamil extraction and the founder of a school of grammar and literature slightly different from that of Tholkappiar and his scholarly Brahman-compatriots. The latter group of scholars probably lived and laboured with the Tamil scholars of their time in the Pandian capital itself in the heart of the Pandian territory almost on the eve of the second deluge and the founding of the third sangam in modern Madura. On the other hand it is highly probable that Agathiyar lived at an earlier age as a literary recluse in the Pothia hills, far away from the din and bustle of both urban and rural life and activities in the Tamilaham of his times, and during the reign of an earlier ancestor of Tholkappiar's patron, but with the name same as or similar to his.

There are some scholars who are of opinion that all one hears in the entire range of Tamil literature about 'Agathiyar,' and all legends or tales that cluster around the name of 'Agathiyar' either as traditions among the Tamil people or as references in the Tamil poems, must be the wilful concoctions of some mendacious myth-mongers, and that the Agathiyar cult was deliberately started in comparatively recent times only as a counterblast to belittle the fame of the great Brahman author of the classic Tamil grammar, Tholkappiam. But this conjecture has not been proved to be, and I think it need not necessarily be, the only possible conclusion. It is equally probable to argue that the apotheosis of 'Agathiyar' into almost a deity, and canonising him as the star Canopus on the one hand, and ascribing to him all and sundry fabulous and irreconcilable incidents relating to different legendary personages in the lores of the Aryan mythology on the other, might have been the work of men whose object was to bury the prehistoric Tamilian precursor and pioneer in the field of Tamil Literature with a view to resurrect him as a great Aryan saint, who alone could shed lustre and light in the dim twilight on the horizon of Tamil culture. It is very true that all this mystery surrounding the name and life of Agathiyar, known as the patriarch of Tamil literature, is still befogged, and requires clearing by the light of further scrutiny and research. It is also true that the suggestion made in this paper may not suffice well to lift the veil and let

the flood of light into all the recesses of this Agathiyan myth. Yet I present my few thoughts in this paper on this question, only in the hope of inviting more accurate thinking, and more scientific review and reconsideration of all the materials bearing on this problem in the light of modern research and criticism, and with a view to ensure a truer perception and judgment in the sequel.

Nature Poetry in Kalidasa's Raghuvamsa

By

A. C. SUBRAMANYAM

(Annamalai University)

The great rivers of India have also found their full meed of recognition in Kālidāsa's poetry. Poetry, myth and tradition are woven together in his references to the Ganges, the greatest and holiest of India's rivers. The puranic story of Bhagiratha bringing the Ganges from heaven for the purification of the ashes of his forefathers finds more than one reference. ¹Raghu followed by his army is compared to Bhagiratha with the Ganges behind him—the Ganges which had been released from the tangles of Siva's matted locks. ²Kusa bowed to the waters of the tri-streamed river which rippled by the tossing of the boats on it and which secured the salvation of his ancestors who were turned to ashes by Kapila. The splendour of the waters noisily streaming on Atithi's head³ shone like the Ganges falling on the head of Ishwara. The mythical origin of the Ganges from Vishnu's foot is referred to in the description of the Lord in the Tenth Canto.⁴ "That speech issuing from the mouth of the Lord with the radiance of his teeth seemed to be the residual stream of the Ganges flowing upwards after issuing out of his foot." Describing the hermitage of Atri⁵ the poet refers to the tradition that Anasūya directed the three-streamed river—which is as a chaplet in the matted hair of the three-eyed God, and the golden lotuses in whose waters are plucked by the hands of the seven sages—to flow into the grove for the daily bath of the ascetics. After defeating the Vangas⁶ equipped with fleets, Raghu erected triumphal columns on the islands in the Ganges. Kusa⁷ crossed a stream of the Ganges flowing from the Vindhya, by a bridge of elephants. The gods singing the praises of Vishnu⁸ state that though many paths lead to the goal of life they all converge in Him as the streams of the Ganges in the ocean. Referring to the dark waters of the Yamuna⁹ and the milky waters of the Ganges the poet says that the sandal paste from the breasts

1. R. IV, 32.

2. R. XVI, 34.

3. R. XVII, 14.

4. R. X, 37.

5. R. XIII, 51.

6. R. IV, 36.

8. R. X, 26.

7. R. XVI, 33.

9. R. VI, 48.

of the Zenana ladies of Sushēna made the Jumna even at Mathūra to look as if she had joined the Ganges. The Ganges¹⁰ in autumn with a narrow stream and with lotus-oblations on her broad sand-banks is compared to Kausalya with the infant Rama by her side. Pointing out the Ganges to Sita during their return from Lanka¹¹ Rama refers to the graceful, slow-flowing Ganges (Mandākini) with her clear, steady stream of waters and appearing thin in the distance like a string of pearls hanging from the neck of the earth near the mountain. When Kausalya¹² and Sumitra saw the returned exiles their cold tears of joy rushed into their scorching flow of tears of grief just as the cold flow of the streams descending from the Himalayas rushes into the summer-heated waters of the Ganges and the Sarayu. Sita,¹³ during pregnancy, desired to re-visit the sacred hermitages on the Ganges, the hermitages abounding in Kusa grass where the offerings of wild rice were devoured by wild animals and where young hermit girls had been her companions. Lakshmana¹⁴ about to abandon Sita was, as it were, prevented by the Ganges (flowing) in front of him, with her wave hands that were raised. But these pictures of the Ganges pale into insignificance when compared to Rama's¹⁵ description of the sacred river in Canto XIII. Says Rama to his royal consort: "Behold this Ganges who having her stream broken by the ripples of the Yamuna seems here to be a necklace of pearls with interwoven emeralds suffusing them with their splendour; there she is like a chaplet of white and blue lotuses; in one place she resembles a row of royal swans to whom the *Mānasa* lake is dear while in another place she looks like a beautiful floor painted with black and white sandal; in some spot her bosom is a fret-work of variegated moonbeams passing through leaves; in another her surface looks like a fleece of white autumnal cloud with the blue sky visible through it in places; in yet another spot she seems to be the body of Ishwara smeared over with ashes and decorated with black serpents. Those who bathe in the confluence of the two rivers are freed from re-birth even without the knowledge of the Supreme Spirit." Rarely does the poet display greater wealth of imagery in any other part of his writings.

The Sarayu (Gōgra), on whose southern bank Ayodhya is situated, finds frequent reference in the story of the Kings of Kōsala. Aja¹⁶ gave up his body in the confluence of the rivers Ganges and Sarayu and

10. R. X, 69.

11. R. XIII, 48.

12. R. XIV, 3.

13. R. XIV, 28.

14. R. XIV, 51.

15. R. XIII, 54 to 58.

16. R. VIII, 95.

went to heaven to sport with his departed queen. Dasaratha¹⁷ erected many golden sacrificial posts on the banks of the Tamasā and Sarayu. The Sarayu¹⁸ greets the returning Rama with the cool breeze from her waves as if his own mother abandoned by the king were embracing him with her wave-like arms. As intelligence arises from the invisible principle so, say the Vedas, the Sarayu arises from the *Mānasa* lake the pollen from whose golden lotuses is enjoyed by the breasts of *Yaksha* women. Sacrificial posts adorn her banks and past the kingly city of Ayōdhya flow her holy waters which are rendered holier still by the ablutions of her kings after the horse-sacrifices. The kings of Ayōdhya have been dandled on her lap and nurtured on her waters; so she is the nurse of the Kōsala kings. On the banks of the Sarayu, Lakshmana¹⁹ gave up his body by yoga and to the followers of Rama,²⁰ the Sarayu became the ladder to heaven on his ascension. The presiding deity²¹ of Ayōdhya complains to Kusa and says: "I am pained to see the waters of the Sarayu with its sands denuded of oblation-offerings, with no contact with bathing materials and with her cane-bowers deserted." Returning to Ayōdhya from Kusāvati, Kusa²² saw on the banks of the Sarayu hundreds of sacrificial posts fixed in square pedestals which had been set up by earlier Ikshvāku Kings.

Many others of the Indian rivers are also mentioned in the *Raghuvamsa*. Raghu crossed the Kapisā (Cossya)²³ on a bridge of elephants and reached Kalinga. Raghu's soldiers sported in the Kāvērī²⁴ while the Pāndya king gave him pearls of price (as if they were his collected fame) taken from the mouth of the Tāmraparni.²⁵ His conquests extended to the north-eastern end of India up to the Lauhitya²⁶ (Brahmaputra). Aja, on his way to the Vidarbha Kingdom, encamped on the bank of the Narmada.²⁷ Sunanda tells her royal mistress that the pleasure gardens of the King of Ujjain were fanned by the cool breezes from the Sipra,²⁸ a tributary of the Chambal and the Narmada (Rēva)²⁹ flows round the city of Māhishmati, the capital of the king of Anūpa. Returning with his bride, Aja met his enemies as the Sōna³⁰ with her surging waves meets the Ganges. Dasaratha erected sacrificial posts on the banks of the Tamasā³¹ while Rama halted on its bank the first night

17. R. IX, 20.

18. R. XIII, 60 to 63.

19. R. XV, 95.

20. R. XV, 100.

21. R. XVI, 21.

22. R. XVI, 35.

23. R. IV, 38.

24. R. IV, 45.

25. R. IV, 50.

26. R. IV, 81.

27. R. V, 42.

28. R. VI, 35.

29. R. VI, 43.

30. R. VII, 36.

31. R. IX, 20.

of his exile. Rama rested on Sita's lap in the cane bowers on the banks of the Godavari³² his cheeks being fanned by cool breezes. The hermitage of Agastya was on her banks. The hermits on the bank of the Yamuna³³ sought Rama's protection against the giant, Lavana. Later, Satrugna³⁴ built the city of Mathūra on her banks. The *chakravakas* in her waters made her look like the braid of hair of Mother Earth decorated with golden studs. Various features of rivers in general are also pressed into the service of his poetry by Kālidāsa. Indumati,³⁵ who had a navel as beautiful as an eddy, passed by the King of Sūrasēna as a river going to meet the sea passes by a mountain on her route. While Rama was returning from Mithila adverse winds harassed the army by their violence as the waters of a river³⁶ overflowing its banks cause trouble to dry land. Parasurama makes light of Rama's breaking of Janaka's bow because it had already been weakened by Vishnu : a light wind overturns a tree situated on a river bank³⁷ when its roots have been dug up by the current of the stream. Sūrpanaka approached Rama and Lakshmana in turn and rejected by the one she returned to the other as the stream of a river³⁸ touching both banks in turn. During Atithi's reign the subjects who were affluent under his father became still more prosperous as the rivers³⁹ full in Srāvana become still more so in Bhādrapada. Trade flowed freely on the rivers⁴⁰ as if they were domestic pools, over woods as if they were pleasure gardens, over mountains as if they were houses. During his reign Varuna made the water courses easily passable for sailors.

Nowhere in the world does nature appear in greater splendour than in this land stretching from the Himalayas to the Sētu, from the Brahmaputra to the Indus ; and the wealth and variety of her life in hill and dale is surpassed by no other part of the globe. Nature in her changing beauty of day and night, morning and evening, seasons and equinoxes must provide incessant food for poetic reflection in this vast sub-continent of Asia and it is no exaggeration to say that Kālidāsa's poetry attains the meridian of its glory in the portrayal of nature. It is a happy thought of Professor Ryder to wish to see Darwin and Kālidāsa meet ; the more one studies Kālidāsa's attitude to nature the more one realises the truth of Ryder's words ; nature to Kālidāsa is a living presence and in immortal words he has painted the fellowship of man with nature in her varying moods.

32. R. XIII, 35, 36.

33. R. XV, 2.

34. R. XV, 28, 30.

35. R. VI, 52.

36. R. XI, 58.

37. R. XI, 76.

38. R. XII, 35.

39. R. XVI, 41.

40. R. XVII, 64, 81.

With the choicest pearls of poetry he adorns the beauty of an Indian morning. The morning song⁴¹ of the minstrels to wake the son of Raghu on the day of Indumati's *swayamvara* endows it with princely beauty. As the day dawns the moon is pale and the bees moving among the lotuses seem to emulate the charm of Aja's vivacious countenance. Sweet is the breath of the morning which carries with it the fresh flowers from the stalks and the odour of the lotus. On the tender leaves red as coral, drops of dew glisten like pearls in the morning light and remind them of the charm of the prince's smile. The dawn is bright even before the mighty sun is up; the elephants are straining at their clanking chains, their tusks red in the morning sun as if they had pierced the sides of mountains red with minerals; the horses are sniffing at the rock salt placed before them; the flowers of the previous day are disarranged; the lamps have lost the halo of light surrounding them; the pet parrot is mimicking the song of the bards. Again, Kālidāsa compares the concourse of princes⁴² and people after Indumati's choice to a lake in the morning with new-blown lotuses on one side and closed lilies on the other—the friends are smiling and jubilant on one side, the foes are blanched and pale on the other. The disappointed lovers of the princess⁴³ Indumati returned to their camps with their brightness dimmed as that of stars at early dawn. When Aja⁴⁴ met his enemies the stream of blood in the battlefield destroyed the dust as morning dispels darkness. His chariot⁴⁵ being covered by volleys of missiles Aja was discernible only by the topmost point of his banner as the forepart of the day shrouded in mist can be recognised only by the faintly shining sun. The prowess of Raghu⁴⁶ took off the flush of wine from the lotus faces of Yavana women as the rise of an untimely cloud hides the morning sunlight from lotuses. The brave Dasaratha⁴⁷ woke up in the morning in a forest glade having slept in the open away from his retinue and he enjoyed the sound of the flapping of wild elephants' ears and the melodious warblings of birds. To him these were but drums and music. A delightful autumn (Sarad) morning⁴⁸ with golden sunshine and full-blown lotuses resembles the lotus-eyed Vishnu dressed in bright raiment who delights the eyes of Yōgins. The soft rays⁴⁹ of the morning sun are divided between sun and earth; so was the *caru* divided by Dasaratha between Kausalya and Kaikayi. The beauty of a breezeless forest glade⁵⁰ in the early morning with dew noiselessly

41. R. V, 66 to 74.

42. R. V, 86.

43. R. VII, 2.

44. R. VII, 42.

45. R. VII, 60.

46. R. IV, 61.

47. R. IX, 71.

48. R. X, 9.

49. R. X, 54.

50. R. XV, 66.

dripping from the trees is compared with the assembly breathlessly listening to the recitation of Lava and Kusa and shedding tears of appreciative joy. The supreme poet lavishes of his wealth even to describe the foot of the voluptuary Agnivarna⁵¹ which he exhibited to his subjects to reassure them. The foot covered with the red lustre of tender nails resembled the lotus touched by the early morning sun.

The variegated hues of the Indian sunset and the features of the evening sky find poetic expression in many a stanza in the great epic. The radiance of Vasishta's divine cow,⁵² Surabhi, who was of a red colour and who had a slightly curving mark of white hair in the forehead is compared to that of the evening sky of the hue of a tender sprout with the crescent moon. The sacred cow returning to the hermitage from grazing,⁵³ with the king following her and the queen in front welcoming her, resembled the rosy evening between day and night. The beauty of the queen, the power of the king and the charm of the cow are all suggested by this simile. The giant Virādha who snatched away Sita,⁵⁴ was red like the evening cloud and the dust of the brownish ground raised by the army of Bharata⁵⁵ going forward to welcome the homecoming Rama crowned with victory resembled the red evening twilight. When Kusa⁵⁶ was bathing in the Sarayu with his harem the river exhibited variegated colours as those in the sky when the sun sets amidst clouds. The poet describes also evenings of a less peaceful nature. When Rama was on his way to Ayōdhya with his bride,⁵⁷ one evening, the weather was foul. Adverse winds tore down the banner-staffs; with a frightful halo formed round it the sun appeared like a stone fallen from a serpent killed by Garuda with the serpent's terrible body surrounding it. Hawks circled with their grey wings; the clouds were red and moist; and there was dust in all directions because of the high wind; the quarters could not be looked at as women in their monthly courses; vixen howled in the east. When Ayōdhya was deserted after Rama's death the presiding genius of the city complains to Kusā⁵⁸ that the city with her broken turrets and terraces looked like the evening sky when the sun is hidden and the clouds are scattered by high winds.

Day itself becomes a subject for poetic simile when the poet describes the joy of Dilipa⁵⁹ at the expected confinement of Sudakshina. He looked at the pregnant queen as at the sky overcast with clouds at

51. R. XIX, 8.

52. R. I, 83.

53. R. II, 20.

54. R. XII, 28.

55. R. XIII, 64.

56. R. XVI, 58.

57. R. XI, 58-61.

58. R. XVI, 11.

59. R. III, 12.

the right season when a shower of rain is expected. The king of the Prāgjyotishas⁶⁰ (Assam) could not bear the dust raised by his chariots which hid the sun and made the day gloomy and overcast as a cloudy day without any shower. But the day⁶¹ when Aja and Indumati proceeded through the city was one of brilliant sunshine. The road was strewn with auspicious flowers and grains; triumphal arches were radiant like the rainbow; the sunshine was warded off by flags and buntings. When Aja rejoined Indumati⁶² after routing the enemies the princess greeted the victor through her attendants as the grassy forest glade besprinkled by drops of fresh rain water hails masses of clouds by the notes of peacocks. The four sons of Dasaratha⁶³ won the hearts of the people as days covered with dark clouds at the end of summer.

The short, but bright June night,⁶⁴ with the early part bathed in the silvery light of the moon high up in the heavens is compared to a disappointed lady who is deceived in expecting her lover at the tryst, and consequently who is wasting and pale-faced. In the days of Dilipa⁶⁵ there was such security of person that even if at night a drunken woman fell asleep on the high road half way to an assignation no hand was raised to molest her. Again the presiding deity of Ayōdhya⁶⁶ complains to Kusa that while in her prosperous days women with glittering and jingling anklets went at night along the streets to meet their lovers, in the days of her decay she-jackals haunted the streets howling all the time. The complexion of Tādaka⁶⁷ who came against Rama and Lakshmana is compared to the blackness of the night of the dark half of the month. In describing Sudakshina⁶⁸ during the first months of her pregnancy the poet gives a magnificent sketch of the night nearing dawn. The queen who had laid aside her ornaments because of her wasted body with her pale face resembled the night at the point of daybreak when the stars are few and the moon of little lustre. While King Atithi⁶⁹ was going out in procession the city ladies followed him with eyes beaming with love as in clear autumn nights the heavenly bodies follow the polar star.

The great poet has so skilfully woven into the fabric of his great epic brilliant sketches of the seasons that literary critics of later days have been tempted to think that no *Mahākāvya* would be complete without a description of the seasons. The most noteworthy feature of

60. R. IV, 82.

61. R. VII, 4.

62. R. VII, 69.

63. R. X, 83.

64. R. IX, 38.

65. R. VI, 75.

66. R. XVI, 12.

67. R. XI, 15.

68. R. III, 2.

69. R. XVII, 35.

Kālidāsa's sketches of the seasons is the close inter-relation portrayed between man and nature. He shows us how men's feelings and actions are excited, guided and tempered by the seasonal changes ; nay, he portrays the whole of creation as seen in the changing seasons, acting and acted upon, a fellowship of men, animals and plants growing and changing as the days roll on.

To Raghu who had established himself on the Kosala throne with even greater splendour than his predecessors ; the autumnal season (Sarad)⁷⁰ clearly discernible by lotuses came like a second goddess of royal splendour. After the heavy rains the light clouds had shrunk to insignificance and the sun's path being free his insufferable heat, as also the king's valour, penetrated to all regions. Indra put back his rainbow and Raghu took up his long bow ; clearly the king and Indra took turns to promote the people's welfare by their bows. Autumn with his umbrella of the white lotus and his *Chauri* of flowered *Kāsha* grass imitated Raghu but did not attain his regal splendour. Men looked with equal pleasure on the king's smiling face as on the clear and radiant moon. The grandeur of his renown seemed to be scattered over the rows of swans, in the constellations of stars and on the waters full of lilies. Women seated under the thick shade of sugar-canes watching the fields of *shāli* corn sang the fame of the protector which arose from his merits, recounting his deeds from his early youth. The star Canopus (Agastya) rose with great splendour and the waters became clear and calm ; but the hearts of his enemies became agitated. His bulls furious with vigour, digging up the banks of rivers, seemed to imitate the sportive grace of his prowess. His elephants poured forth rut from the seven parts of their bodies as if emulating the *saptaparna* tree with its ichor-scented flowers. The rivers had become fordable and the roads mudless ; the season seemed to persuade the king to march with his army. Similarly, the vernal season (Vasanta) with fresh flowers came to honour the mighty Dasaratha.⁷¹ Wishing to go north the sun left the Malaya mountain brightening the early mornings by melting away the mist. Then there was the bursting of flowers and the appearance of tender foliage, then the hum of bees and the notes of the cuckoo—thus spring appeared in the thickly wooded forest sites. Bees and water-birds haunted the lakes full of lotuses charged with honey as suppliants round the treasured wealth of the king. Love was excited not merely by the Asoka flowers freshly in season but also by its tender leaves placed on the ears of damsels so pleasing to gallants. The *Kurabakas* looked like paintings by Spring on the form of the garden

70. R. IV, 14 to 23.

71. R. IX, 24 to 47.

beauty and bees buzzed round its blossoms. The wine^{71a} from the mouths of pretty ladies caused the *Bakula* to bloom and its sweet scent was fragrant as their own breaths. Bees thronged the *Bakula* for its honey. The *palasa* was full of buds in every branch and the red blooms looked like nail marks on a lover. The sun had only lessened the frost; women still suffered from sore hips and chapped lips. A young mangrove tree in flower with its tender sprouts shaken by the southern breeze appeared bent on practising poses and gestures and thus excited the minds of even self-controlled ascetics. In the wooded groves fragrant with flowers, notes, few and far between, of the cuckoo could be heard for the first time as if they were the measured words of coy maidens. The garden creepers in flower, with bees buzzing round them, were swaying in the breeze and thus resembled graceful smiling dancers singing and keeping time to their song with their hands. Men and women drank wine, the friend of love, fragrant as the *Bakula* flower, the producer of graceful sportiveness in women. The lotuses in the domestic pleasure-ponds were in full bloom and the water birds in them were making excited and indistinct sounds; thus they resembled smiling women with loose and jingling girdles. The nights were bright with the pale moon; mist had disappeared and there was clear moonlight in which lovers sported. Women wore in their hair the soft petalled *Karnikāra* bright like the sacrificial fire fed with oblations and a gold ornament as it were to sylvan beauty. As the young woman with the *Tilaka* the forest site was adorned by the *Tilaka* tree on whose flowers dark bees had settled. The jasmine in bloom on the supporting trees maddened the minds of men; her fragrance went to their heads as wine; her white flowers amidst the tender sprouts simulated the smiles of damsels. Garments more crimson than the dawn, shoots of barley on the ears, the warblings of the cuckoo, these forces of Cupid, laid beaux at the feet of ladies. The bunches of the *Tilaka* flowers with swarms of bees around them looked like the *Jālaka* ornament worn by ladies, the bees representing the hair and the flowers the pearls. Bees followed the cloud of pollen raised by the wind from the gardens—the cloud which was as it were the banner of love and the cosmetic for the face of vernal beauty. Men and women enjoyed the swing festival.

71a. R. IX, 30 cf.

स्त्रीणांस्पर्शात्प्रियंगुर्विक्सतिबकुलः सीधुगण्डूपसेकात्
पादाघातादशोकस्तिलककुरबकौ वीक्षणालिम्नाभ्याम् ।
मग्नारीनर्मवाक्यात्पटुमृदुहसनाच्चम्पको वक्रवाताश्चूतो
गीताभ्रमेरार्धविक्षतिचपुरोर्तेनात्कार्णिकारः ॥

The cuckoos seemed to have delivered this message to women from the God of Love : " Lo ! fair ones ! lay aside anger and strife. Youth once gone returns not." Again as a prelude to the description of Kusa's bathing in the Sarayu with his harem Kālidāsa describes the hot season (Grīshma).⁷² During this season women appeared in light dresses, with few ornaments and with upper cloths adorned with pearls. When the sun came back to her from his southern course, the northern quarter shed cool tears of joy as it were by a flow of melted snow from the Himalayas. The days had become very hot and the nights had wasted away ; thus they resembled an eager lover and a grieving mistress. The domestic ponds were drying up ; the waters had left the mossy steps and the lotus-stalks had risen above the water ; women could safely play in them since the waters were only waist deep. There were a few jasmine buds in the forests and the bee placing its foot on each and humming seemed to be counting them. Of nights the heat was terrible and the *Sirisha* flowers worn by passionate women got stuck in the perspiration. The wealthy spent the hottest part of the day in specially cooled houses, lying on stone slabs washed by sandal juice. After their bath and fumigation women wore on their lovely loose hair interwoven jasmine flowers. The charming sprout of the *arjuna* tree, yellowish by the particles of pollen, looked like a broken bit of Love's bow string. The fragrant mango-sprouts, the fresh blossomed trumpet flower and the mellow wine removed the troubles of lovers. The rays of the full and glorious moon allayed the torturing heat.

Apart from these set descriptions of the seasons many passing allusions to seasonal features are also to be found. Sunanda tells the princess Indumati that if she chose the king of Sūrasēna, during the rainy season,⁷³ seated on stone-slabs wetted with moisture and scented with *Shailēya*, she could watch the dance of the peacocks in the delightful dales of the Govardhana mountain. While Rama and Lakshmana were in the Dandaka forest the giant Virādha snatched away Sita from between them as drought⁷⁴ removes the rain from the midst of August and September. Rama allowed to remain behind neither the war-cry of Mēghanāda nor his bow dazzling as the bow of Indra just as the autumnal season⁷⁵ causes the thunder and the rainbow to vanish. Dasaratha took out his mighty bow as the month of Bhādrapada⁷⁶ holds up the rainbow which has for its string the streak of golden lightning.

72. R. XVI, 43 to 53.

73. R. VI, 51.

74. R. XII, 29.

75. R. XII, 79.

76. R. IX, 54.

King Nala got a son named Nabhas who was dear to the hearts of men as the month of Srāvan.⁷⁷ The house of Raghu was adorned by the four sons of Dasaratha as the celestial garden by the four seasons.⁷⁸

Closely allied to his description of the seasons is his sketch of seasonal sports first of Kusa's bathing in the Sarayu in the hot season⁷⁹ and then of the pleasures of the voluptuary, Agnivarna. Once during *Grishma* King Kusa war-d to sport with women in the waters of the Sarayu which had in them excited swans and floating flowers. Regal arrangements were made for the king's bath: tents were pitched on the banks and dangerous water-animals were dragged out. The swans of the Sarayu were frightened by the sounds of brushing armlets and tinkling anklets of pretty women who ran down the steps. The bathing of the ladies lent variegated colours to the water as of a sunset. The women's eyes though washed of collyrium, sparkled with passion. The women swam more because of excitement than of ability, their ear ornaments of *Sirisha* flower dropped in the waters while even their pearls got unstrung without their knowledge. The ladies had navels like whirlpools, eyebrows arched like ripples, and breasts like *chakra-vakas*. The charming disorder of the ladies and the sweet music pleased the king who sported among them like Indra in the heavenly Ganges with the celestial nymphs. Sporting with his harem the king was brilliant as sapphire among pearls. Decked in garlands of *Kutaja* and *Arjuna* flowers reaching down from the shoulders and with the body covered with *Kadamba* pollen King Agnivarna⁸⁰ sported with his ladies during the rains on artificial hillocks which had excited peacocks in them. When the clouds rumbled his angry mistresses embraced him without any persuasion. He enjoyed the company of women in the bright autumnal moonlight under an awning in the terrace. To the voluptuary the sandy banks of the Sarayu with the swans on it looked like the hips of a woman encircled with a girdle. During the winter women attracted him by their rustling garments scented with *agaru* and *dhupa* and showing the golden waistbands underneath. Through the long and windless nights of *Sisira* the king enjoyed uninterrupted pleasures by lamplight. In spring the flame of love was fanned by the warm southern breezes loaded with the scent of mango-blossoms. The king enjoyed the pleasures of the swing and the embraces of the ladies who were anointed with sandal and adorned with pearls and gold. With his ladies he drank wine mixed with mango-sprouts and the red *Pātala* flowers.

77. R. XVIII, 6.

78. R. X, 80.

79. R. XVI, 54 to 71.

80. R. XIX, 37 to 46.

The sun, the moon, the ocean, the elephant and the lotus are favourite subjects for poetic comparison for Sanskrit poets. They have a recognised symbolic value and well-understood attributes. Kālidāsa uses for his poetic purposes this symbolic and euphuistic aspect of nature but always adds to it a delicate power of suggestion and an astounding wealth of poetic imagery.

The sun is the most outstanding of nature's works in the tropical sky. It is natural that he should be regarded as the sovereign monarch with a thousand arms, powerful beyond compare, the dealer of life and death to all creation. He occupies a commanding place in the Vedic pantheon and his names are honeycombed with traditional and mythical associations. In almost every one of these aspects the sun appears in Kālidāsa's poetry. Dilipa⁸¹ taxed the people only for their benefit; the sun takes up vapour only to return it a hundredfold. The sun⁸² with his horses fleetier than the wind traverses the four quarters extensive as ocean: so does Raghu with his intelligence, the fourfold learning. The quickness of Raghu's intelligence, its subordination to one dominant beneficent purpose, and the vastness of the field as well as the ease of mastery are all suggested here. Dilipa⁸³ with Raghu was powerful as the autumnal sun. On receiving the kingdom from his father Raghu⁸⁴ shone more brightly as does the fire by the radiance deposited in it by the sun at the close of day. As the moon gets the name *Candra* because he delights men, the sun the name *tapana*⁸⁵ by his extreme heat so the king was deservedly a *rāja* since he pleased his subjects. His irresistible power extended in all directions as the unendurable rays of the autumnal sun.⁸⁵ Even the heat of the sun diminishes when he reaches the Pāndya kingdom⁸⁶; but the Pāndya could not endure Raghu's prowess. The sun⁸⁷ started on his northerly course wishing to suck up vapour with his rays; so did King Raghu turn north wishing to overthrow the northern kings with his arrows. Raghu⁸⁸ tells the sage Kautsa that he derived all his knowledge from his preceptor as the world derives all activity from the sun. What the sun is to the living world that the good preceptor is to the pupil; he quickens, vivifies and sets in motion the powers latent in him. Replying to the king's words of welcome Kautsa⁸⁹ tells Raghu that they were prosperous in all parts of his kingdom: how could there be evil when Raghu was the

81. R. I, 18.

82. R. III, 30.

83. R. III, 37.

84. R. IV, 12, cf. 'अग्निवा आदित्यः सायंप्रविशति'

85. R. IV, 15.

86. R. IV, 49.

87. R. IV, 66.

88. R. V, 4.

89. R. V, 15.

protector ? While the sun shines how can pitch darkness hide the visions of men ? Raghu quickly got a son from the sage's blessing as the animate world gets light from the brightly shining sun.⁹⁰ In his description of the King of Avanti Kālidāsa refers to the Puranic story which recounts how Tvashtṛ, the Vulcan of the Indian pantheon, on the request of his daughter *Samgnā*, who was unable to endure the brightness of her husband, the sun, mounted the sun on his grinding wheel and trimmed off a part of his bright disc. Sunanda describes the king to Indumati, thus : "This long-armed,⁹¹ broad-chested and slender-waisted lord of Avanti shines like the sun ground down with great effort by Tvashtṛ who had mounted him on his grinding wheel." The princess⁹² did not fix her affections on the King of Ujjain who gladdened his friends and weakened his foes by his valour, as the lily loves not the sun who dries up the mud and causes the lotus to bloom. Having spent three nights with Aja on the route the King of Kundina⁹³ parted from him as the moon recedes from the sun at the end of the conjunction. During the battle between Aja and his enemies the sun⁹⁴ appeared as if through a pile of silken cloths because of the dust, raised by the horses, thickened by the wheels of chariots and spread out by the flapping of elephants' ears. With the former king intent on a life of spiritual tranquillity and the new king just entering on his royal career the family of Raghu⁹⁵ resembled the sky with the moon almost gone down and the sun just come above the horizon. The radiance of Dasaratha⁹⁶ whose fame extended to all the ten quarters was like that of the sun with his ten-hundred rays. Having freed himself from the debts due to sages, gods and ancestors by the recital of the Vedas, by the performance of sacrifices and by the begetting of a son King Aja shone brightly like the sun⁹⁷ freed from the misty halo. Similarly Dasaratha resembled the sun⁹⁸ by his radiance. Going in front of Indra with a single chariot, the valiant Dasaratha armed with his bow laid the clouds of dust obscuring the sun⁹⁹ by the blood of the demons. The Gods harassed by Ravana

90. R. V, 35.

91. R. VI, 32. Note the epithets **उदग्रबाहुः**, and **तनुवृत्तमध्यः** which are applicable to the sun as well as the king.

92. R. VI, 36.

93. R. VII, 33.

94. R. VII, 39.

95. R. VIII, 15. Note the epithets **प्रशमस्थित** and **अभ्युद्यत** which emphasise the similarity between the kings and the sun and moon.

96. R. VIII, 29.

98. R. IX, 6.

97. R. VIII, 30.

99. R. IX, 23.

went to Vishnu as travellers oppressed by summer heat¹⁰⁰ resort to a shady tree. "Thy deeds transcend all praise, even thought and expression, as the treasures of the ocean or the brilliance of the sun,"¹⁰¹ say the Devas to Vishnu. Rama and Lakshmana followed the path of the highly powerful sage Viswamitra as the months of Chaitra and Vaisākha follow the bright sun's course.¹⁰² Rama received a missile from the sage as the sun-stone (the double-convex lens) receives from the sun¹⁰³ the light that consumes faggots. Rama and Lakshmana alternately guarded the sage as the sun¹⁰⁴ and the moon alternately rising and setting protect the world from deep darkness. Dasaratha started towards Mithila with a huge host overcasting the brightness of the sun¹⁰⁵ by the dust raised by his army. Parasurama wearing the paternal sacred thread and the maternal strong bow looked like the sun¹⁰⁶ in conjunction with the moon or the sandal tree with the serpent. Rama and Parasurama standing facing each other resembled the sun¹⁰⁷ and the moon facing each other in the evening on a full moon day. Like the sun¹⁰⁸ travelling from the northern solistice to the southern, Rama went southwards from Ayōdhya and the subjects felt his absence more and more and were in tearful gloom when he was away. When Ravana's heads were cut off the ten necks of his falling body appeared like the images of the morning sun¹⁰⁹ reflected in the ripples of water. Describing the Dandaka forest to Sita, Rama points out the sage Sutikshna¹¹⁰ who performs penance under the scorching rays of the seven-horsed sun, who nods at Rama in recognition and who, after the brief interruption caused by the Pushpaka, resumes his gaze on the thousand-rayed one. Satrugna, best among the resplendent, whose path was indicated to him by the *munis* who went in front of his chariot, shone like the sun¹¹¹ preceded by the Vālakhilyas, the sixty thousand pigmy sages born of Samnāti, the wife of Kratu. The Sage Vālmiki went up to the glorious Rama who was accompanied by Sita and her two sons; thus accompa-

100. R. X, 5.

101. R. X, 30.

102. R. XI, 7.

103. R. XI, 21.

104. R. XI, 24.

105. R. XI, 51.

106. R. XI, 64.

107. R. XI, 82.

108. R. XII, 25.

109. R. XII, 100.

110. R. XIII, 41 and 44.

111. R. XV, 10. The reference is to Bhāgavata, Bk. XII, Chap. 11.

nied Rama resembled the radiant sun¹¹² worshipped by the sage with the Vedic hymn having correct accent and words. The handsome Atithi purified the families of his father and mother as the brilliant sun¹¹³ purifies the southern and the northern courses. The image of the gaily decked king shone in the golden mirror like that of the *Kalpataru* on Mount Meru in the sun¹¹⁴ just rising on the horizon. The rays of the sun¹¹⁵ burst forth some time after his rise ; but Atithi rose up with all his qualities at once. N^o thing remained unnoticed by the king who had thrown out rays of light in the form of spies over the whole of his territory just as everything is seen by the sun¹¹⁶ free of all clouds. The king made all his subjects faithful to his rule by destroying the darkness of ignorance and evil, by imparting a correct knowledge of material things and by removing calamity by his very sight ; so is the sun¹¹⁷ auspicious to the sight and gives men a true perception of things by dispelling darkness. The moon's rays cannot enter the lotus ; nor can sunlight penetrate the lily ; but the King's virtues were appreciated even by his enemies. Vyushitāsva¹¹⁸ who had quartered his cavalry on the beach had a lustre like that of the sun.

(*To be continued.*)

112. XV, 76. The vedic hymn is Sāvitrī.

113. R. XVII, 2.

114. R. XVII, 26. The image is very suggestive and beautiful ; but complex and unfamiliar.

115. R. XVII, 34.

116. R. XVII, 48.

117. R. XVII, 74 and 75.

118. R. XVIII, 23.

On the Notion of Time

By

P. S. NAIDU

(*Annamalai University*)

(*Continued from page 181, Vol. III, No. 2.*)

Time is not to be identified with movement; nor is it to be identified any more with number. It is undoubtedly true that Time is the 'number of motion,' but its nature is not exhausted by the nume-
rable aspect of movement. Hence, in the absence of a perceiving mind the application of arithmetic to movement would, no doubt, be impossible; but motion would exist and Time which is not bound down to its numerable aspect would certainly exist.

Aristotle's concept of 'nowness' throws the puzzling problem into greater relief. That a period of Time has elapsed is realised by us when we distinguish two 'nows' and an interval between them, just as we realise that motion has taken place by distinguishing the two points in space from one of which a body has moved to the other. A 'now' has been now here and has moved back into a 'then'; a fresh 'now' has taken its place. This 'now' is the end of past time, and the beginning of present Time. Yet we are told that these 'nows' are no more parts of Time than points are parts of a line. The continuous nature of Time cannot be adequately defined by a succession of 'nows.' When we compare Aristotle's definition of the 'now' with Plato's discussion of the 'moment,' we realise how these great systematic thinkers grapple in vain, in the absence of proper aid from Psychology, with the tantalising concept of the 'specious present.'

Wolfson, in his monumental edition of the Critique of Aristotle, points out that some of the difficulties in the conception of Time could be overcome if Crescas' definition be accepted. 'According to this new definition, Time is not motion but duration. Unlike motion, duration does not depend upon external objects for its existence, and it does not arise in our mind out of the motion of things outside ourselves. It is rather the continuity and flow of the activity of the thinking mind. . . . Given therefore a thinking mind, even were there no external reality, there would be such duration. Unlike

Aristotle, then this definition maintains that it is not Time that measures motion but it is rather motion that measures Time.¹

In a metaphysical system wherein the process of change—the actualisation of the potential—plays a preëminent part, we should expect Time to occupy the central place. But such an expectation in the case of Aristotle is fore-doomed to disappointment on account of two reasons. In the first place the 'Entelechy', towards the realisation of which the 'potentiality' is striving, is prior to the possible, and in the second place God who is the 'limit, the Being who existed to the *nth* power, towards which the universe aspired and mounted step by step,' is Himself immovable and unchanging and so transcends Time. Into the essence of things whose limits are thus definitely pre-determined Time cannot possibly enter.

The Stoics and the Epicureans

The story of the development of the concept of Time, and as for that matter, of any physical or metaphysical concept, in the post-Aristotelian period prior to the birth of Neo-Platonism is soon told, because it is a story of deterioration.

The *Stoic* treatment of nature is refreshingly original and independent. In their dynamical theory of nature *force* occupies a more important place than *matter*. The only type of cause which they recognise is the efficient cause. Such a promising start should have yielded a fruitful concept of Time, but the Stoics made no attempt to develop the idea. 'Time also, is by them set down as immaterial; and yet to the conception of Time a meaning as concrete as possible is assigned, in order that Time may have a real value. Zeno defines Time as the extension of motion; Chryssipus defines it, more definitely, as the extension of the motion of the world. The Stoics affirm the infinite divisibility of Time and space, but do not appear to have instituted any deep researches into this point.'²

To the Epicureans Time is simply an accident of motion. A consideration of their view of the universe and of change within the universe will give us the clue for understanding their concept of Time. Epicurus in his physical speculations says 'the universal whole always was such as it now is, and always will be such. For there is nothing into which it can change; for there is nothing beyond this universal

1. Crescas' Critique of Aristotle (edited by Wolfson), p. 96.

2. Zeller; The Stoics, Epicureans and Sceptics, p. 186.

whole which can penetrate into it, and produce change in it'³ Further on he says, 'the atoms are in a continual state of motion.. All the atoms are necessarily animated by the same rapidity At the same time, an atom has not, in any moment perceptible to the intelligence, a continued movement in the same direction; but rather a series of oscillating movements from which there results, in the last analysis, a continued movement perceptible to the senses.'⁴

The atoms, no doubt, partake of motion and in consequence are in Time, but the change resulting from their movement is not ultimate since it does not affect the whole. Time which is an aspect of motion is merely an accident. Lucretius also, in his poem *De Rerum Natura*, expounds the same doctrine of Time.

Resumé

We have now reached the close of the first great era in European speculation. In this period practically every aspect of the problem of Time is brought to the fore and discussed, but not worked out to a finish. That Time is indissolubly linked with change is fully realised by every one in the long line of thinkers from Heracleitus down to Aristotle, but when they come to the actual definition of the relationship between Time and change they seem to be on very uncertain ground. Even the best of their definitions, namely, that of Aristotle, is but a sorry approximation to the brilliant formula of Bergson. The reason for the defect is that for all ancient thinkers changelessness is the highest ideal, and so according to them absolute perfection is without Time. Yet they seem to be reluctant to throw Time overboard so summarily. Plato makes a valiant attempt to retain Time (in the form of Eternity) within his world of ideal existences, but any such attempt is bound to fail so long as the highest ideal is barren, static and lifeless.

The ancients, Zeno the Eleatic and Aristotle in particular, probe deep into the subtleties of the concepts of infinity and infinite divisibility of Time. The contradictions involved in them are brought to light. But an important point seems to have been overlooked. We may readily agree with Aristotle that any given interval of Time is infinitely divisible, but we should not lose sight of the fact that it is a finite quantity. The sum of a convergent series constituting of an infinite number of terms is a finite quantity. This simple mathemati-

3. Bakewell: *Source Book of Ancient Philosophy*, p. 293.

4. *Ibid*, p. 293-4.

cal truth forces on our attention the distinction between the percept and concept, between the idea logical and the idea psychological. This distinction as applied to Time is mentioned by Aristotle, but is not developed by him. In the same manner there is an incomplete discussion of the nature of the 'specious present,' called the 'moment' by Plato and the 'now' by Aristotle. The abstruse problem of duration, of consciousness also seems to have been raised by the latter but without any fruitful results. In short, Ancient Philosophy projects brilliant flashes of intermittent light on the problem of Time without illuminating any aspect of it clearly.

Plotinus

The lonely star of Plotinus rising late in the firmament of Ancient Philosophy and soaring high above the other luminaries radiates strange light of uncommon brilliance; light which illumines without dazzling. Plotinian metaphysics is unmistakably *sui generis* and should be treated as such. On the ground that a period of five centuries separates him from the last of the Ancients, and that his thought has certain affiliations with Christian mysticism, Plotinus is sometimes clubbed with Mediaeval thinkers. But his system is as near to Mediaeval mysticism as it is to Platonic Idealism. We, therefore, treat him as constituting a class by himself.

The problem of Time is discussed by Plotinus in the *Enneads* (III, 7). He surveys the views of all his predecessors and says, 'it is enough for us to select the wisest of their opinions and try to understand it.' The Pythagorean, Platonic, Aristotelian, Stoic and Epicurean views are passed in review and finally the second named doctrine is chosen as being the most satisfactory. On the basis of the Platonic theory of Time, Plotinus proceeds to construct his own. The most striking portion of the Plotinian definition of Time is the naturalness upheld in it. He says that 'Time simply had to be.' No doubt philosophers have been sorely troubled by the contradictions involved in it; but these contradictions 'which become apparent when the intellect treats them as ultimate realities are one of the means by which the Soul is forced upward to the intuitive perception of the Spiritual life.'⁵

'For Time may be said to be either (a) motion, or (b) that which is moved, or (c) something pertaining to motion Of those, however, who say that Time is motion, some indeed assert that it is

every motion ; but others, that it is the motion of the Universe. But those who say it is that which is moved, assert it to be the sphere of the Universe. But those who say that it is something pertaining to motion consider it either as extension of motion, or as its measure, or as some consequence of motion in general or of regulated motion.' (Enneads III, 7, 6) .

Plotinus thus sets his face definitely against all views of Time which identify it, either in part or whole, with physical movement and for the first time links it with the activity of the Universal Soul. Time is the result of the desire of the restless soul to manifest itself. 'Time, still non-existent, reposed in the bosom of Reality, until Nature, wishing to become its own mistress and to enter into possession of itself, and to enlarge the sphere of its activities, put itself, and Time together with itself, into motion.' (Enneads III, 7, 11).

Time thus arises through the constant activity of the World-Soul to translate what it sees in the external world into another form. 'Time is the activity of an eternal soul, exercised in creation.'

Though Plotinus protests against the distinction between the phenomenal and the noumenal in regard to Time, he yet speaks of 'every distinct idea Yonder becoming a finite purpose Here.' 'Time is the *form of willed change*.'

The most important point in the discussion of Time by Plotinus is the inclusion of the idea of teleology in it. Evidently he cannot conceive of change or movement without an end. He asserts that potentiality derives its meaning only when we view it in the light of an actuality into which the potentiality should ultimately develop. Although he identifies Time with duration, yet his thought fails to rise to the Level of Bergson's *La Duree*.

War in Ancient India

By

V. F. RAMACHANDRA DIKSHITAR

[Mr. V. R. Ramachandra Dikshitar, M.A., Lecturer in Indian History, University of Madras, delivered a course of five special lectures under the auspices of the Annamalai University, at the Oriental Hall, Annamalainagar, on the 16th, 17th, and 18th November 1934. The following is a summary of the lectures. Editor, A. U. J.]

LECTURE I.

The Psychological Background of War.

The history of India is largely a history of the Hindu culture and progress and it begins at the third millennium B.C. according to the tentative conclusions arrived at by an intensive study of the finds in the Indus Valley.

War is an institution as much of the ancient aboriginal tribe as of the later civilised community. Hence the existence of it can be traced to the ages before the compilation of the R̥g Veda Samhitā. The Veda envisages a period of prolonged wars with the tribes which went by the name of Dasyus. The Purāṇas, epics and the Tamil classics refer to wars as having been waged. Coming to the historical times we hear of the wars waged by the Nandas, Mauryas, Andhras, and the Guptas.

The ancient wars, as the modern ones, can be accounted for by the psychological impulses that have actuated the contending parties in a war. In ancient times of which barbarism and savagery were the main characteristics we find that bellicosity was the order of the day and the only object of worship of the primitive tribes and communities was Bellona or the Goddess of War. Among the Indo-Aryans who appear to have been lovers of peace in preference to war on account of its horrors, the necessity they felt for finding a home to live in and the opposition they had to face from the people who had already settled on the soil, led to wars being waged. According to the evidence of the Aitareya Brāhmaṇa war begat King among the Devas and if we are to identify them with the Indo-Aryans then we have the assurance that the institution of war among them

preceded that of kingship itself. When the society came to be well settled on the soil and the institution of war came to be recognised to be a necessary evil there arose a class of warriors whose occupations were hereditary in character. These came to be called the Kṣatriyas. Their sole duty was the waging of wars and the protection of the society. The necessary education, drill, and discipline for the preservation and continuation of the military spirit were confined to this community. As the guardians of the peace of the country, the Kṣatriyas came to occupy a high social rank. Further the mental atmosphere in which they lived and moved made them ever be in a state of war preparedness. This attitude of the mind was not entirely the concomitant result of a spirit of adventure but wholly a result of the realisation of the fact that by war, the warrior and hero were doing a piece of service which tended towards common good and which was consequently acceptable to the common will. The Kṣatriyas believed honestly that peace was a negation of all noble service and noble energy. It was this psychological barrenness of peace that led to frequent wars in Ancient India. During times of peace individual warriors engaged themselves in a number of adventurous campaigns. The motives for them were various and chief among them were the capture of women, lifting of cattle, and seizure of wealth. The warrior was always a robber and a pillager. This life was the knight's support and cattle-lifting provided the needed gain. The Eiyar who are mentioned in the Tamil Classics, for example, were professional cattle-lifters.

The Gandharva and Svayamvara marriages appear to have been the survivals of the earlier and much simpler forms which consisted of knights meeting with girls openly or secretly and carrying them away with or without the knowledge of the parents of such girls. Such capture of girls led to wars. Bhīṣma, for instance, had to fight for the hands of three girls while Arjuna had to fight for the hand of Subhadrā.

The Kṣatriyas were pugnacious by nature and this pugnacity had its share in precipitating the outbreak of wars. The ancient Hindu society encouraged such pugnacity under a system of civilised legality. The Mātsya Nyāya worked with wonderful effect in India. The problem of defence also led to the outbreak of wars in ancient India. Every state, big or small, cultivated its own defences to prevent aggressive encroachments by the other states. The Arthaśāstra of Kauṭilya envisages a circle of states always at war with each other. Hence the frontiers of the empires were strengthened. Janasthāna,

the northern frontier of Rāvaṇa's Empire was strengthened by the Rāk-ṣasa king. A son of Bharata was appointed as the governor of Tak-ṣaśīla, the frontier province of the empire of Rāma. Gāndhara, the present Kandhahar, formed the frontier of the empire of the Pāṇḍus and Mauryas.

Another cause of war was the fear impulse. The subordinate ruler was always afraid of the imperial sovereign, and the emperor was always afraid of the possible revolt of the subordinate. Hence emperors and subordinates alike were always in a state of mutual suspicion. The spirit of jealousy among the princes led at times to the outbreak of wars. The jealousy entertained by the Kauravas against the Pāṇḍavas which led to the great battle of Kurukṣetra is an instance in point.

Jealousy brought in its train imperial notions of overlordship and love of glory. The ancient Indian king brought under his sway his neighbouring princes and proclaimed himself the sole ruler of the earth. It was this love of glory that made each of the respective rulers of the three Tamil kingdoms of South India carry his sword as far north as the Himalayas and implant on its lofty heights his respective crest.

It was the same love of glory that prompted our ancient emperors to perform big sacrifices like the Aśvamedha after defeating 100 kings which would raise them to Indrahood. After the performance of these the king took the title of Sārvabhauma or Ekarāṭ.

LECTURE II.

The Warrior's Code.

Hindu military science recognises two kinds of warfare—the Dharma Yuddha and the Kūṭa Yuddha, otherwise known as the Prakāśa Yuddha and the Mantra Yuddha. According to the former certain ethical principles and standards were followed. For the waging of war without regard to moral standards would degrade the institution of war to mere animal ferocity.

Before the commencement of war an ambassador was sent to the enemy with an ultimatum that he should either fight or submit. War was then resorted to only after the instruments of diplomacy had failed to effect the desired end. Prayers were offered to God for a week before the army started for war, and on the night before the battle the king used to sleep in his chariot with his weapons by his

side. The following were some of the rules observed in the battle-field. A warrior fought with only one warrior and when he became disabled the fight was given up. The weak or wounded man was not to be killed or one who had no son. A king was to fight only with a king. The aged, children, women, the retreating, or those who held straw on their lips as a sign of unconditional surrender, were not to be killed. Temples and other public institutions were left unmolested. Prisoners of war were to be accorded generous treatment. Usually the defeated ruler was reinstated in his position. The internal system of administration and other social institutions were left unmolested. The wounded were carefully attended to. In the army there were many physicians to attend to the wounded. Battle was stopped during the night. The announcement of victory was followed by the offer of worship in temples. According to Bṛhaspati one-sixth of the spoils went to the king and the rest to his friends and allies. In the fight itself cruel and poisonous weapons were not used.

In the Kūṭa Yuddha recourse was had to crafty methods, intrigues, charms and spells. The baser methods of diplomacy like māyā and Indrajāla underlay the practice of Kūṭa Yuddha.

LECTURE III.

Army and Army Organisation

Regular and proper organisation is the life and soul of an army. Hindu India possessed the classical four-fold forces of chariots, elephants, horsemen and infantry collectively known as the Caturāṅgabala. To these divisions, the power of counsel and kośa or the power of treasury were later on added. As regards the chariots they appear to have been under a special officer who was called the Rathādhyakṣa. The value of the chariot lay in the protection it gave to the army in general. Usually besides the charioteer there were two fighting men in the chariot. The elephants were also under the supervision of a special officer. The war elephant generally marched in front of the army clearing the way of weeds and shrubs. The cavalry was managed by a special department. In the selection of the horses, their age, strength and size were taken into account. Similarly the infantry as a separate army department was under the charge of a special officer of the state. They carried bows in their hands which they used in war. Commissariat and admiralty formed two other divisions of the army. Candragupta's army was controlled by a body consisting of six divisions with five members in each. Evidence is not lacking to show that fleets were maintained in the

interests of the state and wars were waged on the seas. For the army the members of all the castes were recruited. The army was divided into many units and were known as patti, senāmukha, gulma, gaṇa, vāhini, pratana, camu, anīkini, and akṣauhini.

In war as in all other important state affairs the ancient Hindu king sought and followed the advice of his ministers. Rāvaṇa had his council which he very often consulted in the course of his wars. The Council consisted of wise and loyal men versed in military science and grown grey in experience. The council of ministers was to be consulted whenever envoys were sent to foreign states. The king generally followed the advice of his councillors and it was more or less obligatory on his part to do so. Such councils were summoned and controlled even in the battle-fields. For instance, when Balarāma and Kṛṣṇa were in the mountains of Gomanta Jarāsandha who arrived at its foot, held a council to devise means how to encounter them.

The special importance of finance for war was recognised in ancient India. Among the important heads of military expenditure in ancient India were the salaries of soldiers, military officers and diplomatic agents, the construction and repair of fortifications and the purchase of military requisites. Further, considerable sums of money were spent as bribes for securing information and fomenting troubles in the enemy-territory. We see that the military expenditure was a little over 50 per cent of the total expenditure of the state. The Arthaśāstra insists on the regular payment of soldiers. Full pay was to be given to those who had completed the practical course of training and half-pay to apprentices. It appears that the pay of the military officers and soldiers was dependent on the economic condition of the times. In the face of sudden attacks and in the absence of the necessary funds in the treasury, a king could encroach upon the private property of his wealthy subjects by levying more taxes on them. Voluntary contributions were raised at times of grave danger to the state but these were returned later.

The arsenal consisted of weapons of war. Registers were kept in which were entered details as to the shape, size, value, number and name of each weapon manufactured and distributed.

There appears to have been a separate foreign office in the post-epic age and the officer-in-charge of this department was known as Sandhivigraha or Mahāsandhivigraha.

The army was managed by officers of different grades. One of them was the senāpati who was generally chosen on the eve of the

battle. But in the later period it is doubtful if he occupied the same position and discharged the same functions. Another officer was the nāyaka for whom Kauṭalya recommends 12,000 paṇas as pay. Another was the Kumāra who appears to have been subordinate to the senāpati in office. The Saciva was the minister of peace and war. Among other officers mention may be made of the Pattipāla, gaulmika, Śatānīka, Anusātika, Sahasrānīka and a few others.

LECTURE IV.

Kinds and Methods of Warfare

Wars in ancient India can be divided under three heads—land wars, naval wars and aerial wars. The land fights included generally wars on plain country, forests and hill regions. They were fought away from villages and cities. March was of two kinds, slow and quick or forced. It was undertaken after the roads had all been previously been examined and had been cleared of thorns and ferns. Rivers and canals on the way were forded either with the help of the elephants or by boats and canoes. The vanguard forces marched first followed by the king and the main body of the army. The less brave were in the rear. The flanks of the army were protected by horsemen, elephants and charioteers.

The camp was made on the plain country. It was generally quadrangular in shape, furnished with four gates, six roads and nine divisions, and surrounded by ditches for purposes of defence in times of danger. The camp was a miniature town and a self-sufficient unit.

The site chosen for battle was generally a plain. In the front the flower of the army were stationed. Behind them were the archers, the horsemen, and elephant-men in order. The king himself did not take active part in the actual operations of the field. Entangling the enemy in an ambush was at times preferred.

During actual operations the armies were arrayed according to certain arrays known as vyūhas in Sanskrit Literature. In the great war at Kurukṣetra the armies were arrayed according to the vyūhas. A particular vyūha was adopted at a particular time and this was influenced by diplomatic considerations of a strategical and tactical character. But in the Kūṭayuddha a different type of tactics was followed. Enemies were duped by unrighteous acts. False shouts of victory were made.

Siege warfare was an important aspect of land fights in ancient India. Natural fortifications were taken advantage of and in their

absence artificial fortifications were made. The fortress was a town in itself. All the amenities of life could be had there and it was surrounded by deep ditches, moats and high walls with towers over them and gates piercing them. Five methods appear to have been followed in capturing a fort. They are intrigue, pretending to retreat, winning over the people, actual siege, and taking by assault. First the enemy was tried to be brought down by bribing his officers. Sieges could be begun only if every circumstance was in favour of the invader and against the enemy.

Naval warfare was also in vogue in ancient India. There is sufficient evidence to show that there was a good navy in India from very ancient times—even in the days of R̥g Veda. Sahadeva is said to have crossed the seas and brought many islands under his sway. Sugrīva speaks of Sumatra, Java and even the Red Sea when he sent his monkey hosts in search of Sītā. The Andhras had a good fleet. There seems to have been connection between Kalinga and Ceylon from very early times. Likewise in South India, the Pallavas, the Ceras, the Pāṇḍyas, and the Coḷas had fleets of their own. The overseas dominions of Coḷas are too well-known. The Ceras are said to have defeated the Yavanas on the Sea. There seems to have been a separate department of admiralty in the charge of a Superintendent. His jurisdiction included vessels used for commercial purposes also. The nautical enterprises were not uncommon in Ancient India.

There is also evidence of aerial warfare in Ancient India. The flying machines were of different shapes like those of elephant, horses, monkeys, different kinds of birds, chariots and other cars. They were made of light wood. Lt.-Colonel James Churchwood of Mount Vernon, New York, announced sometime back that the astonishing contents of 125 tablets discovered in India showed that the armies of 10,000 B.C. in India had flying machines of great simplicity that would carry scores of men.

LECTURE V.

Diplomacy and Diplomatic Agents

In ancient India wars were tried to be avoided by a well calculated policy which we now term as diplomacy. Sāma, dāna, bheda, danḍa were the four cardinal points of the ancient Indian diplomatic system. Diplomacy was followed from very early times in India. In the course of a discourse which the diplomat Kaṇika gives to Dhṛtarāṣṭra he stresses the importance of diplomacy by the acts of concilia-

tion, the expenditure of money or by producing disunion among his allies by the employment of every means in one's power. Nārada and Bharadvāja also have their views on the means of gaining a victory over the enemy by diplomacy.

According to the Maṇḍala theory, a maṇḍala consists of twelve kings, the invader, immediate enemy, invader's ally, enemy's ally, invader's ally's ally, enemy's ally's ally, rear enemy, rear friend, ally of rear enemy, ally of a rear ally. Behind them are the Madhyama (medium) and Udāsīna (super). The last two are states of higher grades of strength perhaps to meet emergencies of reference to such powers. The conception of the Maṇḍala is essentially dynamic. The kings residing in the successive concentric circles are not neutrals. Each of these possesses the power of deliberation, lordship, and activity with their respective adjuncts of intellect, treasury and heroic valour. Besides each of them had the five veritable elements of sovereignty, the minister, the country, the fort, the treasury and the army.

Generally, so far as foreign policy was concerned, six methods were followed by the kings in ancient India. They are Sandhi (peace), Vighraha (war), Āsana (maintaining a post against an enemy), Yāna (preparedness for attack), Saṁśraya (friendship), and Dvaidhī-bhāva (double dealing or duplicity). The conditions that determined their action were daiva (providential) and mānuṣa (human). The invader was to set out for conquest when he found his enemy weak and himself prosperous. He was also to watch the movement of the madhyama and udāsīna kings. Alliances were to be sought with good kings and were to be kept to the very end. Peace was to be made with equals and superior powers and hence indiscriminate alliances were deprecated.

Vighraha was a diplomatic contest and was a means to an end, i.e., to avoid regular wars. To the four means of sāmā, dāna, bheda and danḍa were added in the later days three more—upekṣa, māyā and indrajāla. The conquering king was asked to observe this policy of conciliation by the promise of villages, forests and of sheep and cattle. It was used to bring the weaker kings under control. If conciliation did not give the desired effect the method of enticing the enemy by gifts was adopted. The policy of bheda or dissension was pursued in the case of the unrighteous. Recourse was had to the policy of danḍa which was not actual punishment but threat of punishment if the three means had failed to give the desired effect. Upekṣa or the policy of indifference was followed by the weaker kings in their

relations with superior powers. Māyā was a baser kind of diplomacy by which the ruler of a kingdom discarded the straight path and tried to hoodwink the enemy by intrigues. Indrajālā was a strategem to ensnare the enemy. Thus these seven expedients were all based on the six-fold policy.

The diplomatic agents were ambassadors and spies. The institution of ambassadors is not a peculiar feature of modern warfare. These officers occupied a very honoured place as befitted their status and functions. They were persons skilled in getting information about the strength and position of enemy's force. They belonged to a noble family and were intelligent, honest, industrious, versed in all sciences and they possessed the faculty of reading other minds. They were also expected to have an attractive personality. Kauṭalya distinguishes between three classes of ambassadors, but none of them was analogous to the modern consuls of foreign states. There were salutary regulations touching the treatment that was to be meted out to an envoy. Delivering the message entrusted to him, respecting treaties, issuing ultimatums, getting allies, resorting to intrigue whenever necessary, sowing dissensions among the enemies' friends, carrying away by stealth or otherwise the enemy's secret force, relatives, and wealth, and doing the work of a spy occasionally were the functions of a true ambassador.

Important as was the ambassadorial system, espionage was equally important. From the point of view of diplomacy the institution of spies had a greater utility as the king invariably took action on the report of the spies. There was a regular secret service department. They were as it were the king's eyes and watched the movements of the enemies. In theory secret diplomacy was denounced but was still put into practice.

In concluding the course of lectures, the lecturer said: "To-day there is a genuine attempt to abolish war and eliminate force altogether from world politics. But war is a law of human existence. It cannot be eradicated, but it may be ennobled. Let us therefore prefer conciliation to coercion and let us aim more at peace and less at war. Let us aim at the annihilation of international anarchy and the substitution of world peace. Let us resolve on the renunciation of war and make the ties of peace too strong to break. Let us think and act not in the terms of nationalism but in terms of internationalism."

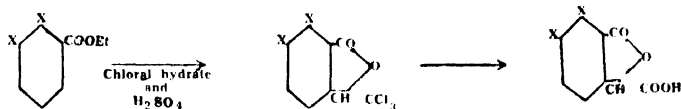
A synthesis of ψ -meconine-carboxylic acid and new syntheses of 2:3-methylenedioxy-11:12-dimethoxy-oxyprotoberberine, and 2:3:11:12 tetramethoxy-oxy-protoberberine.

By

S. N. CHAKRAVARTI AND M. SWAMINATHAN.

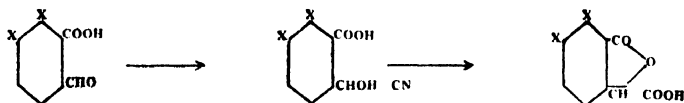
(*Annamalai University*)

There are very few good methods available for the synthesis of substituted phthalide-carboxylic acids. The method which has been most widely used is the one due to Fritsch (*Annalen.*, 1897, 296, 354; 1898, 301, 358. Compare also Alimchandani and Meldrum J., 1920, 117, 968; Herzig, *Annalen.*, 1921, 421, 289; Alimchandani J., 1924, 125, 539; Graves and Adams, *J. Amer. Chem. Soc.*, 1924, 45, 2453; Chakravarti and Perkin J., 1929, 200; Charlesworth and Robinson, J., 1934, 1532). The method consists in condensing a substituted benzoic acid (or ester) with chloral hydrate and then hydrolysing the product:—



The chief drawback of this-otherwise excellent-method is that it cannot be always applied, and that good yields are obtained *only when* there is a para activating group (*e.g.*, p-methoxy group, etc.) present in the starting acid.

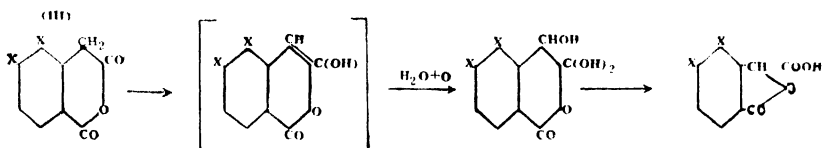
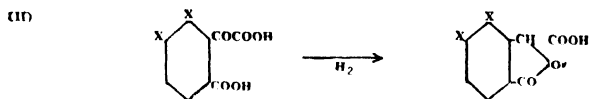
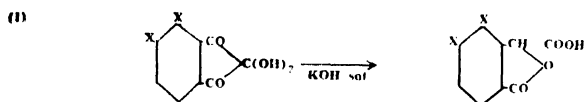
A more recent method is to condense a substituted O-phthalaldehydic acid with hydrogen cyanide (or KCN) and then to hydrolyse the product (Compare Freundler, *Bull. Soc. Chim.*, 1914, (iv), 15, 465; Perkin, Ray and Robinson, J., 1925, 127, 740):—



It has not been found possible to use this method extensively as the starting substances—the substituted O-aldehydo carboxylic acids—

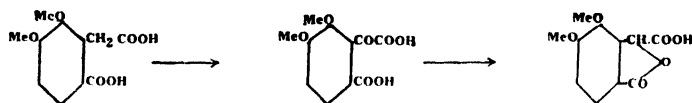
could not be readily obtained in many cases (compare Perkin and Trikojus, J., 1926, 2925 ; Chakravarti and Perkin, loc. cit.). Now that a simple general method of synthesising the substituted O-aldehydo-carboxylic acids has been recently discovered (Chakravarti and Swaminathan, J. Indian Chem. Soc., 1934, 11, 715) it should be possible to utilise Robinson-Freundler method of preparing phthalide-carboxylic acids more extensively.

There are three other reactions which could, probably, be used as general methods for synthesising the substituted phthalide-carboxylic acids. The possibilities of these schemes, which are outlined below :—

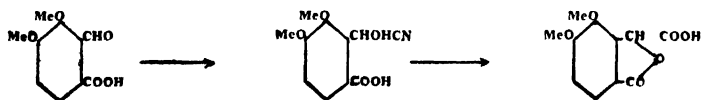


are being examined and an account of these experiments is reserved for a future communication. The chief advantage of these new methods would be that the starting substances would be more readily available substances than the O-aldehydo-acids required for Robinson-Freundler method.

It has now been found that the substituted phthalonic acids (Chakravarti and Swaminathan, loc. cit.), can be reduced to the corresponding phthalide-carboxylic acids in almost quantitative yields. Thus ψ -meconine-carboxylic acid (II) m.p. 175° has been prepared in the following manner :

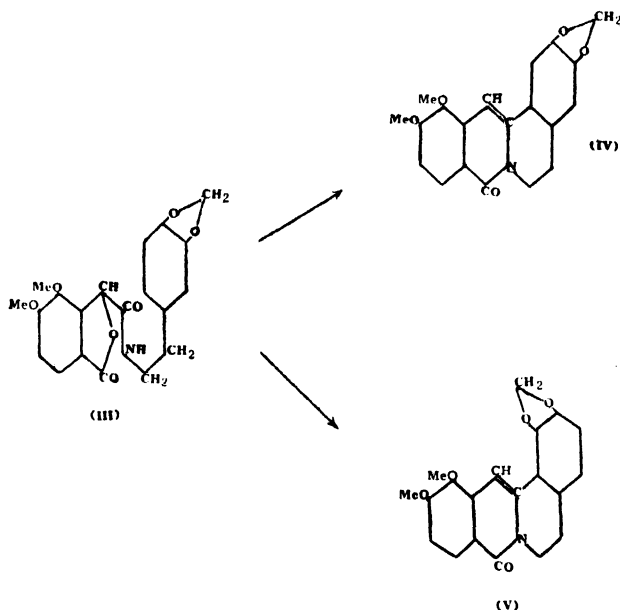


This important acid has also been obtained in an excellent yield by the following alternative route :—



ψ -meconine-carboxylic acid, having thus become readily available, has been utilised to synthesise 2 : 3-methylenedioxy-11 : 12-dimethoxy-oxy-protoberberine and 2 : 3 : 11 : 12-tetramethoxy-oxy-protoberberine, with the object of further elucidating the constitution of these substances.

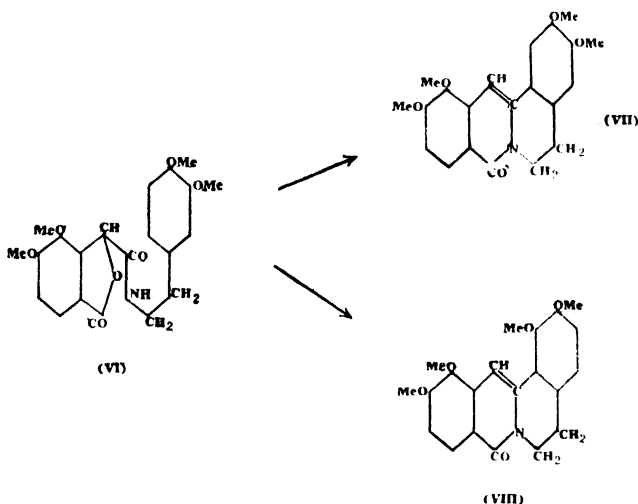
For the synthesis of 2 : 3-methylenedioxy-11 : 12-dimethoxy-oxy-protoberberine, the acid chloride of ψ -meconine-carboxylic acid was con-



densed in benzene solution with β -piperonylethylamine, when ψ -meconine-carboxy- β -piperonylethylamide (III) was formed. When

this was heated with phosphorus oxychloride, and the product decomposed with cold water, and the aqueous solution basified, a basic substance separated which, on reduction with zinc dust and acetic acid was converted into a pale yellow substance m.p. 229° , identical in all respects with 2:3-methylenedioxy-11:12-dimethoxy-oxyprotoberberine (IV) previously obtained (Chakravarti and Swaminathan J. Indian Chem. Soc., 1934, 11, 109).

In a similar manner, the acid chloride of ψ -meconine-carboxylic acid readily condensed with β -veratrylethylamine, yielding ψ -meconine-carboxy- β -veratrylethylamide (VI). This amide was heated with phosphorus oxychloride during 5 hours on the steam-bath and the product decomposed with cold water. The aqueous solution on being made alkaline, gave a basic substance, which on reduction with zinc dust and acetic acid, was converted into 2:3:11:12-tetramethoxy-oxyprotoberberine (VII) m.p. 190° .



The above syntheses do not afford a rigid proof of the structures assigned to (IV) and (VII), for (III), on treatment with phosphorus oxychloride, might give rise either to (IV) or to (V), and (VI) might give rise to either (VII) or (VIII). The alternative formulae (V) and (VIII) are, however, improbable because their formation necessitates a condensation occurring in the ortho-position to a methoxyl or methylenedioxy group in preference to the condensation in the far more reactive

para-position, which has so far always been the experience in iso-quinoline condensation of this type.

EXPERIMENTAL.

ψ-meconine-carboxylic acid (II). This acid can be readily obtained by the following methods :—

(i) A mixture of *ψ*-opianic acid (2 g.), pure potassium cyanide (.8 g.) and water (8 c.c.) was allowed to remain during 40 minutes and after the addition of 15% hydrochloric acid (6 c.c.), boiled for ¼ hour. α-cyano-*ψ*-meconine separated from the hot solution as an oil, which readily crystallised on cooling the liquid. The substance was collected, washed with water, and hydrolysed by boiling with concentrated hydrochloric acid (6 c.c.) for 2 minutes. The liquid was diluted with water (20 c.c.) and, on standing, *ψ*-meconine-carboxylic acid crystallised (1.5 g.) from the solution. On recrystallising from water, the acid separated as clusters of prismatic needles (containing water of crystallisation) m.p. 175° after drying. (Found in a specimen dried at 100° C, 55.3 ; H, 4.0. $C_{11}H_{10}O_6$ requires C, 55.4 H, 4.2%).

The acid is readily soluble in hot water, and alcohol, but rather sparingly soluble in petroleum ether, benzene or ether. (ii) 5:6-dimethoxyhomophthalic acid (4 g.) was oxidised with Selenium-dioxide under the conditions previously described (Chakravarti and Swaminathan, J. Indian Chem. Soc. 193, 11, 717), and the solution of crude phthalonic acid in water (50 c.c.) was reduced by the gradual addition of sodium amalgam (100 g. of 4%). After the reaction was over, the solution was filtered and the filtrate acidified, when *ψ*-meconine-carboxylic acid, m.p. 175° gradually separated during several hours (1.5 g.) A further quantity of the acid could be obtained from the mother liquors (.5 g.)

ψ-meconinecarboxy-β-piperonylethylamide (III). The pure acid, which had been dried at 100° (1 g.), and thionylchloride (5 c.c.) were gently boiled for 2 hours in a reflux apparatus. The excess of thionylchloride was completely removed by distillation below 100° in a vacuum and the crude acid chloride was dissolved in dry benzene (10 c.c.) and gradually added to a dry benzene solution of β-piperonylethylamine (prepared from 1.5 g. of the hydrochloride). The mixture was allowed to remain overnight, and then boiled for 2 hours. On cooling, the amide crystallised out from the solution. The crude amide was stirred up successively with excess of dilute hydrochloric acid, and sodium carbonate solution, and then crystallised from alcohol. It separated in fine silky

needles (1.5 g.) m.p. 177-178°. (Found C, 62.0; H, 4.7. $C_{20}H_{19}O_7N$ requires C, 62.3; H, 4.9.0%).

2 : 3-methylenedioxy-11 : 12-dimethoxy-oxy-protoberberine (IV). The above amide (1 g.) and freshly distilled phosphorus oxychloride (10 c.c.) were heated together on the steam-bath during 5 hours. The mixture was decomposed by means of crushed ice, and the liquid filtered leaving a small residue. The bright yellow filtrate was made just alkaline, when an ochre yellow base was precipitated. The precipitate was collected, washed with water, dried, and then mixed with zinc dust (5 g.) and glacial acetic acid (25 c.c.) The mixture was then boiled for 5 minutes, a second equal portion of zinc dust was added and the boiling continued for half an hour. The filtrate was diluted with a relatively large volume of ethyl acetate, and the solution washed, several times, successively, with dilute hydrochloric acid, with aqueous sodium hydroxide and with water. The solution was dried over potassium carbonate, filtered and the solvent removed by distillation. The pale yellow crystalline residue was crystallised from glacial acetic acid containing its own volume of water, when a mass of almost colourless needles m.p. 229° was obtained. This was identical with 2 : 3-methylenedioxy-11 : 12-dimethoxy-oxy-protoberberine, previously obtained, mixed melting point being not lowered.

ψ -meconinecarboxy- β -veratrylethylamide (VI). The crude acid chloride (obtained from 1 g. of ψ -meconinecarboxylic acid) was dissolved in benzene (10 c.c.) and gradually added to a solution of β -veratrylethylamine (from 1.6 g. of the hydrochloride) in benzene. The mixture was allowed to remain overnight, and then boiled for 2 hours. On concentrating to a small volume and cooling most of the amide separated. The amide, after successive treatment with excess of cold very dilute hydrochloric acid and sodium carbonate solution, was crystallised from benzene. It separated in needless m.p. 150° (1.2 g.) (Found : C, 62.6; H, 5.6. $C_{21}H_{23}O_7N$ requires C, 62.8; H, 5.7%).

The amide is very easily soluble in alcohol, and sparingly soluble in cold benzene.

2 : 3 : 11 : 12-Tetramethoxy-oxy-protoberberine (VII). This was obtained from (VI) under conditions similar to those used for the preparation of 2 : 3 methylenedioxy-11 : 12-dimethoxy-oxy-protoberberine from the amide (III) (See under (IV)). The substance thus obtained crystallises in colourless needles m.p. 190° (with previous softening) and was found to be identical with 2 : 3 : 11 : 12-Tetramethoxy-oxy-protoberberine previously obtained; mixed melting point being not lowered.

On the Diurnal Variation of Atmospherics

By

N. S. SUBBA RAO,
(*Annamalai University*)

I. INTRODUCTION

The intimate connection between thunderstorms and atmospherics was recognised long ago, and a systematic study has been carried out by several workers with the object of locating the regions from which originate the atmospherics on the earth. The investigations of Watt,¹ Austin² and Appleton³ point to the conclusion that atmospherics in England originate somewhere in the Mediterranean Sea.

There are five large centres of atmospherics, *viz.*,⁴ N. Africa, India, the Malay Peninsula, N. Australia and the region of the Panama Canal. The Committee⁵ on Atmospherics and Weather, appointed by the Royal Meteorological Society, organised experiments in which observers in the British Isles, Norway, Germany, France, Spain, Morocco and Madeira recorded the disturbance of the Radio talks and by directional methods located the sources of disturbance. It has been established⁶ beyond doubt that the range of reception of atmospherics may reach one to two thousand miles and it is most probable that the range, frequently, if not usually, attains the length of the earth's semi-circumference. It can also be said with certainty that the disturbance from atmospherics is greatest on long waves and least on short waves; and it is believed that below 17 metres the reception of wireless signals is entirely free from atmospherics.

India being one of the main sources of the world's atmospherics, provides ample scope for the study of atmospherics and of their relation to the natural electrical phenomena associated with thunder-

1. Proc. Roy. Soc., Vol. 102, pp. 460-478, 1923.
2. Jour. Frank. Inst., 171, 617 May 1921.
3. Phil. Mag. 1923.
4. Ladner and Stoner: Short Wave Wireless Communication. p. 63.
5. Watson Watt. Nature, Vol. 119, p. 689, 1927.
6. Watson Watt. Jour. Roy. Met. Soc., Vol. 52, p. 199, 1926.

storms. It is the purpose of the present paper to describe a simple method of recording the atmospherics and to study the diurnal and seasonal variations in respect of their intensity and frequency of occurrence. At a time when the popularisation of broadcasting throughout rural India is engaging the public attention a study of the atmospherics which are a menace to wireless reception is quite opportune.

2. EXPERIMENT

(a) *Apparatus.*—The apparatus used in the present studies consists of a four valve, straight battery-receiver, the output of which was choke coupled. By employing a choke with two sets of windings the output can be shunted on to a moving coil galvanometer which in conjunction with a rotating drum and bromide paper provided sufficient equipment for recording the atmospherics.

The receiver was kept tuned to a wavelength of 400 metres, the tuning being periodically checked with a calibrated wave-meter. The L.T. and the H. T. voltages were kept during all observations at the same value. Since all factors affecting the set are kept steady it is possible to obtain quantitative measurements from all the records and estimate their variations without any serious error.

The period of the galvanometer was about 1 second and it was fairly well damped. When displaced it returned to rest always before the completion of one oscillation. This was found to be essential in order to prevent the free oscillations of the galvanometer interfering with the records of the atmospherics.

The rotating drum was driven by an electric motor geared down to the requisite speed. After trying various speeds, it was finally found that the one corresponding to a traverse of the spot of light of about 14 cm. per minute exhibited all the necessary details distinctly. The drum was mounted on a screw which advanced it by half an inch parallel to its axis for every complete rotation. Thus using bromide paper of size 10" \times 12", a record could be taken continuously for about 30 minutes at a time. Lower speeds, although more economical, failed to bring out the details.

(b) *The choice of wavelength.* It was originally intended to record atmospherics on three wavelengths, one representing the long wave band, another representing the medium wave band and a third representing the short wave band. The idea had to be given up on account

of certain practical difficulties and the observations were confined to a wavelength of 400 metres. This particular wavelength was chosen as a study of atmospherics on this wavelength would be representative of the local reception-conditions.* This wavelength was found convenient for a twenty-four hour study as there is no station in the vicinity, working on this wavelength.

(c) *Duration of the records.* Although at the start, continuous recording throughout the 24 hours was contemplated, it was later given up on account of the prohibitive cost of the records. A comparison was made between results obtained from records over half an hour and those over five minutes and it was found that the agreement was quite close. Continuous recording was therefore given up in favour of five minute records taken at intervals of two hours. Results dealing with the period, 6th—18th October, 1934, are tabulated and discussed later. On certain occasions, when it was found that atmospherics were too frequent, records were taken at about double the speed and as was to be expected the details came out very much more distinctly.

(d) *Automatic time-marking device.* In order to indicate minute intervals on the records, a small electromagnet was included in the circuit of a standard clock and at the end of every minute it was made to interrupt the beam of light falling on the drum for a short interval and thus to provide an accurate automatic time scale on the records. In addition the electric circuit of a slave clock running close to the set produced by induction two kicks in the galvanometer, and these could be used incidentally, for standardising the entire equipment and for correcting for any slight variations in the amplification produced by the receiver.

With the help of the simple arrangement described above very valuable and accurate quantitative estimates of intensity could be obtained.

(e) *Intensity of atmospherics.* From a study of the electric field variations association with atmospherics, with the Cathode Ray Oscillograph, Appleton and Watt⁷ classify atmospherics into two main classes, (a) quasi-periodics, consisting normally of one complete oscillation of

* Bombay 350.9 metres; Calcutta 370.4 metres; Madras 390 metres; Colombo 428.5 metres.

7. Proc. Roy. Soc., A, 103, pp. 84-102, 1923.

duration 2000 micro-seconds. (b) aperiodics of duration generally 1250 micro-seconds but frequently reaching 0.025 seconds. The wave forms of the main types are given in the paper referred to.

When atmospherics of any of these types are received by a wireless receiver, one half of the above curves is cut off and the remaining portion produces an effect on the galvanometer which is proportional to the total energy of the atmospherics available during this half cycle. The throw of the galvanometer may be taken to be proportional to this energy and this is quite justifiable as the period of the galvanometer is one second and the discharge is over within about $1/500$ second i.e., before the galvanometer has moved sensibly from its mean position. As the object of the investigation was mainly to find how a wireless receiver is affected by these disturbances and as the "effect of an atmospheric seems to be more a function of the energy received than of the amplitude of the disturbance",⁸ we can take the throw of the galvanometer as proportional to the audible effect produced in the receiver.

Estimates of the intensities of the atmospherics have been made from the records on a scale of 10 and from these observations the mean intensities are abstracted and shown in Tables I and II. Atmospherics of amplitude less than 3 did not produce much of a disturbance and so in calculating the averages, amplitudes below 3 have been omitted.

(f) *Frequency of occurrence of atmospherics.* As already described, since an automatic time scale was marked on the records, the number of atmospherics received per minute could easily be counted. Certain complications, however, arise on account of the fact that often atmospherics are not single impulses but consist of strings of impulses and reception is seriously interfered with, and sometimes rendered impossible, by these strings or groups creating "a serious of crashes, bangs and rattles".⁹

When the atmospherics come in groups following each other in quick succession, it is not possible to estimate the strength of the individual components of the group and in such cases, the throw has been taken as representing the intensity of the group. This will give an accurate measure of the strength of the first member of the group, provided the second member comes later than $\frac{1}{4}$ period of the galvanometer. Nevertheless, the number of components in any group could

8. Palmer: *Wireless principles and Practice*, p. 287.

9. *Ibid*, p. 285.

easily be counted from the records, as each individual atmospheric produces a slight thickening of the curve at the point where it arrives, and if an atmospheric of sufficient intensity arrives in a favourable phase of the galvanometer motion, it will show itself as a separate atmospheric.

3. RESULTS.

In Table I are abstracted the results of the preliminary observations made between the 6th and 9th October 1934, at Annamalainagar (Lat. 11° — 25° N., Long. 79° — 42° E.). As the object of the investigation was mainly to study how a broadcast receiver is affected by the atmospherics, observations were confined from midday to 10 p.m., as this period includes the regular hours of 'listening in'. The results are plotted on squared paper and shown in Fig. 1.

TABLE I.

Results of observations from 6-10-34 to 9-10-34 from midday to midnight each day.

	6-10-34		7-10-34		8-10-34		9-10-34	
Time.	Average Intensity.	No./Min.	Average Intensity.	No./Min.	Average Intensity.	No./Min.	Average Intensity.	No./Min.
12 Noon	Nil	Nil			5	1	7	2
1 P.M.					4	24		
2 P.M.	4	6	5	30	5	24	5	28
4 P.M.	4	13	5	33	5	32	5	33
6 P.M.	4	22	4	23	5	34	6	14
8 P.M.	4	25	4	23	5	34	5	14
10 P.M.	5	18	4	23	6	13	6	7

The continuous line indicates the intensity variations and the dotted line, the variations in the number of atmospherics received per minute. When a group of atmospherics arrives, it is counted as one, irrespective of the number of components. The components are in some cases as many as twelve, but these come in such quick succession (usually within half a second) that it is quite legitimate to consider them as a unit for the purpose of the present investigation.

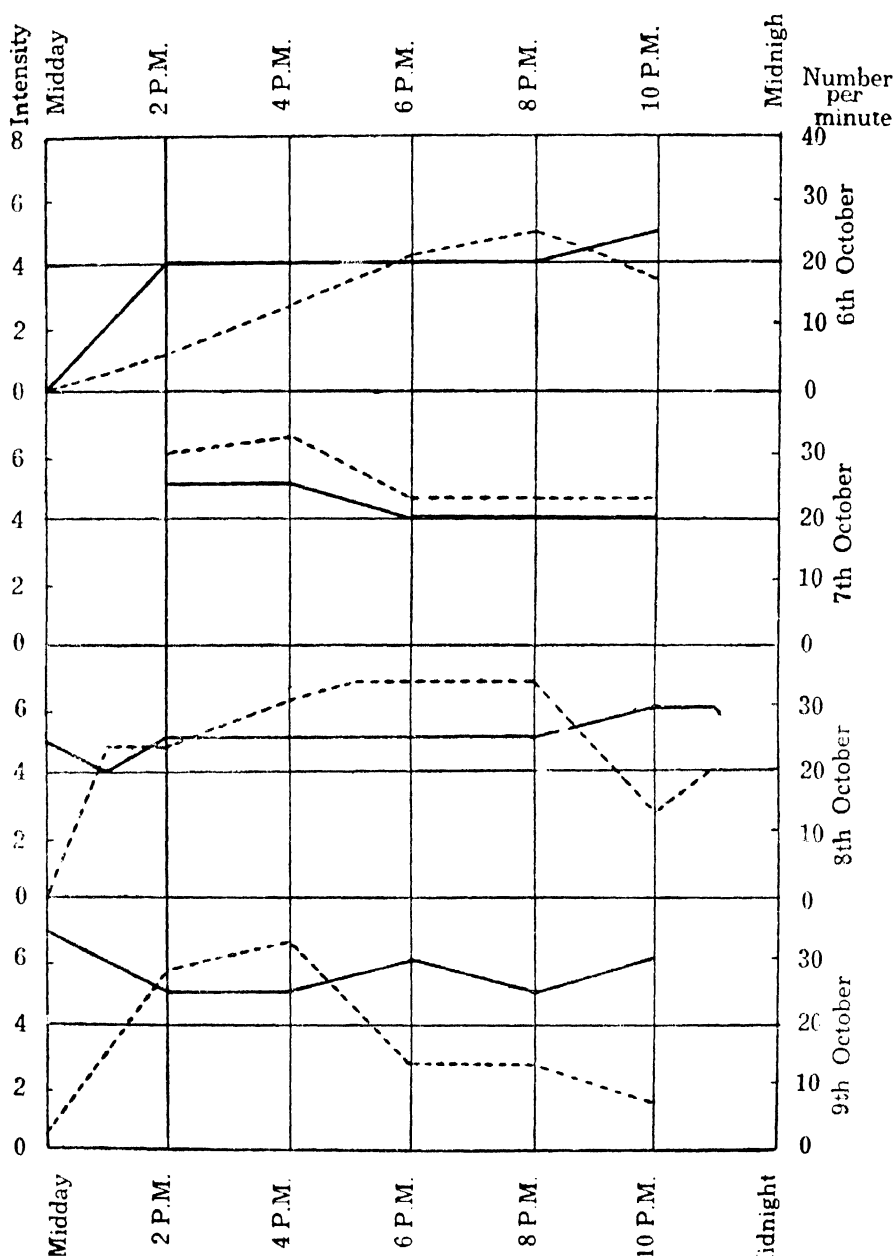


Fig. 1.

Certain regularities are clearly borne out by these curves.

(a) *First set of observations.*

6th October 1934. At midday there were absolutely no atmospherics and then there was a regular increase in the number received per minute, which reached the value 25 at 8 p.m. The intensity was practically constant from 4 p.m., to 8 p.m. At 8 p.m., however, it is seen that while there is a slight increase in the intensity by 25% from 4 to 5, this is accompanied by a fall in the number by about the same percentage.

7th October 1934. In contrast to the above we find that the intensity and the number increase or decrease together on this day.

8th October 1934. One notable feature of this day is the large intensity (5) of the atmospherics at midday, a very unusual condition.

The curves bring about very distinctly the negative correlation between the number and intensity of the atmospherics at three points.

9th October 1934. This day is also characterised by high intensity at midday, which continues with slight variation till 10 p.m.

These curves also bring about very clearly at four points the negative correlation mentioned above.

The four days discussed above show very severe atmospheric activity, rendering reception on the broadcast band absolutely impossible; the maximum intensity recorded being 7, the maximum number being 34, i.e., one group of atmospherics every two seconds. The intensity maxima are not well defined. The maxima in the number of atmospherics received per minute are attained at 8 p.m., on the 6th and 8th, and at 4 p.m., on the 7th and 9th.

There is a distinct negative correlation between the intensity and the number on the 6th, 8th and the 9th. In contrast within this, the two quantities show a distinct positive correlation on the 7th.

(b) *Second set of observations.*

The second set of observations—table II—cover the period from the 11th to 18th October 1934. Observations were made throughout the twenty four hours of each day and the results are plotted in Fig. II. In doing so the day is reckoned from 12 noon to 12 noon. This method of reckoning is found to be suitable for bringing out the diurnal variations most prominently.

TABLE II.

Results of observations from 11-10-34 to 18-10-34.

	11-10-34 to 12-10-34		13-10-34 to 14-10-34		14-10-34 to 15-10-34		15-10-34 to 16-10-34		16-10-34 to 17-10-34		17-10-34 to 18-10-34	
Time.	Average Intensity.	No./Min.	Average Intensity.	No./Min.	Average Intensity.	No./Min.	Average Intensity.	No./Min.	Average Intensity.	No./Min.	Average Intensity.	No./Min.
12 Noon	6	1	Nil	Nil	7	2	5	6	9	1	Nil	Nil
2 P.M.			Nil	Nil								
4 P.M.	4	13					6	10	6	7	5	5
6 P.M.	6	5	6	5			5	25				
8 P.M.	4	9	4	9	5	26			7	1	5	20
10 P.M.	4	9	7	17	6	20	6	11	7	6	6	20
Midnight	4	10	7	17			7	13	9	14	7	5
2 A.M.	4	2	6	16			7	16	8	20	7	7
4 A.M.	4	4	7	26			7	22	7	22	6	2
6 A.M.	7	2					7	3	5	3	Nil	Nil
8 A.M.	Nil	Nil	6	1	7	7	5	1	Nil	Nil	Nil	Nil
12 Noon	Nil	Nil	7	2	5	6	9	1	Nil	Nil	Nil	Nil

11th-12th October 1934. One notable feature is the high intensity at midday with two definite maxima at 6 p.m., and 6 a.m., the intensity dropping to zero between 6 and 9 a.m.

As regards number the maxima occur at 4 p.m., and midnight.

There is a very distinct negative correlation between the intensity and the number.

On the whole, in spite of the large intensity exhibited, the conditions of reception cannot be classed as hopeless.

12th-13th October 1934. No records were taken.

13th-14th October 1934. Atmospheric activity at midday is nil. A distinct peak in intensity is observed at 6 p.m., and a slight reduction at 8 p.m. Thereafter the intensity is practically steady with very minor variations.

The number shows a distinct maximum (26) at 4 a.m. and then a sudden drop reaching the value 1 at 8 a.m.

The atmospheric activity may be considered to be very severe between 8 p.m., and 4 a.m.

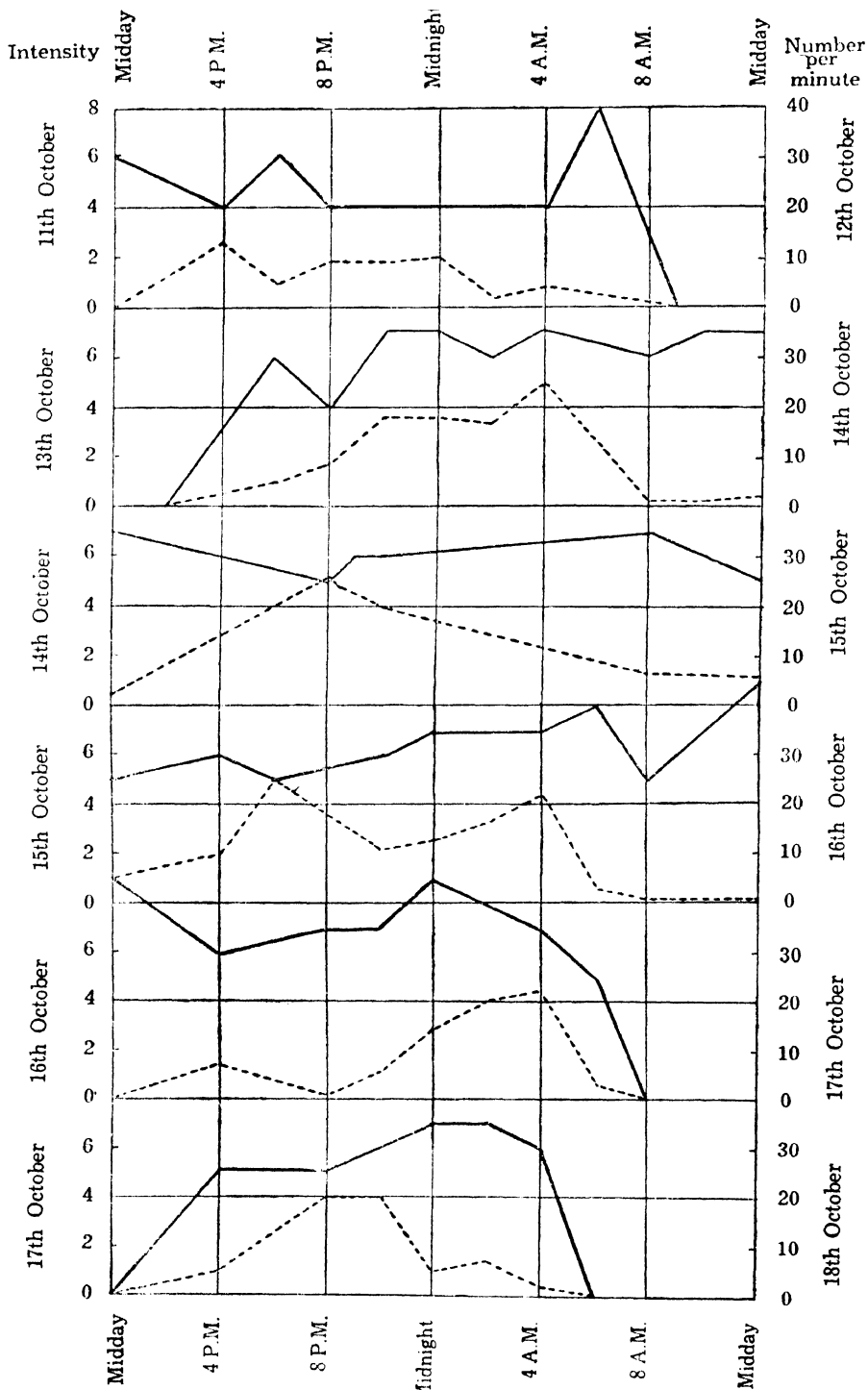


Fig. 2.

The correlation between the number and intensity is neither distinctly positive nor negative.

14th-15th October 1934. A distinct negative correlation is evident. In contrast with the two previous records, the activity has not ceased between 8 a.m., and 12 noon.

15th-16th October 1934. The intensity at midday is high. The intensity curve exhibits three distinct maxima, one at 4 p.m., another at 6 a.m., and a third at 12 noon on the 16th.

The number curve shows maxima at 6 p.m. and 4 a.m.

The atmospheric activity may be said to have attained a maximum at 6 p.m. and 4 a.m.

There is again a very distinct negative correlation between the intensity and the number.

16th-17th October 1934. The intensity at midday is exceptionally high. The maxima occur at midday and midnight.

The number curve shows two maxima, one at 4 p.m., and another at 4 a.m.

The atmospheric activity is very severe between 10 p.m., and 6 a.m.

There is again a clear evidence of negative correlation between the number and the intensity.

17th-18th October 1934. The intensity curve shows only one maximum between midnight and 2 a.m. The intensity drops to zero at 6 a.m.

The number curve shows a maximum between 8 and 10 p.m.

Negative correlation is shown but not very distinctly.

4. GENERAL CONCLUSIONS.

The intensity curve attains in general a maximum either between midday and 2 p.m., or between 4 and 6 p.m. It is seen from the curves that the maximum occurs between 12 noon and 2 p.m., on the 6th, 8th, 14th, and the 16th. (Records for the 10th and 12th are not available); and between 4 and 6 p.m., on the 11th, 13th, 15th and 17th. This appears to point to a forty-eight hourly cycle of variations, but the observations at present available are too few to warrant any such definite inference.

In some cases a second maximum appears to occur any time between midnight and daybreak. The variations, however, do not show any regularities.

The number curves show a maximum either between 2 and 4 p.m., as on the 7th, 9th, 11th and the 15th (No record was taken on the 13th). or between 6 and 8 p.m. as on the 6th, 8th and the 14th (records for the 10th and 12th are not available).

The second maximum appears to occur between midnight and 4 a.m., as on the 12th, 14th, 16th and the 17th or at midnight as on the 18th.

The variations in the number curves also appear to point to a forty-eight hourly cycle.

The periods of maximum atmospheric activity and the probable origin of atmospherics.

Taking into consideration both the intensity and the number, the periods of severe atmospheric activity may be taken on the days discussed above as follows :—

6th.	8 p.m.
7th.	4 p.m.
8th.	4 p.m. to 8 p.m.
9th.	4 p.m.
11th-12th.	Between 4 p.m., and midnight.
13th-14th.	4 a.m.
14th-15th.	(Detailed record is not available).
15th-16th.	4 a.m.
16th-17th.	4 a.m.
17th-18th.	10 p.m.

The periods of maximum atmospheric activity appear to fall into three divisions :—

1. Afternoon about 4 p.m.
2. Early night 8 to 10 p.m.
3. Early morning about 4 a.m.

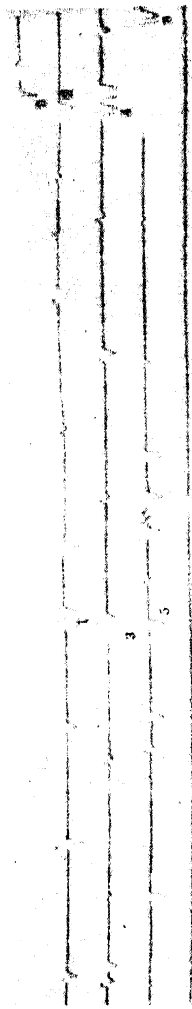
This seems to indicate their origin.

“The observations¹⁰ made by Challenger show that the frequency of thunderstorms at sea have a pronounced maximum between 2 and

10. Ency. Britt. Vol. 15, p. 345.

Wednesday 17th October 1934.

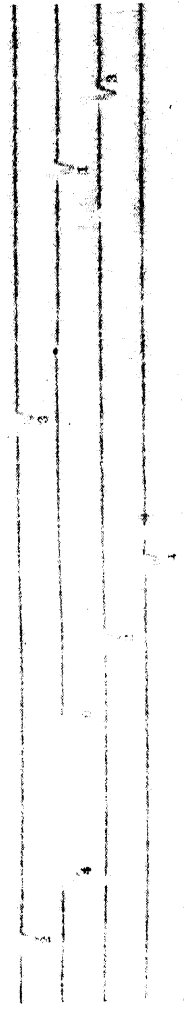
6 A.M.



8 A.M.



12 Noon.



Wednesday 17th October 1934.

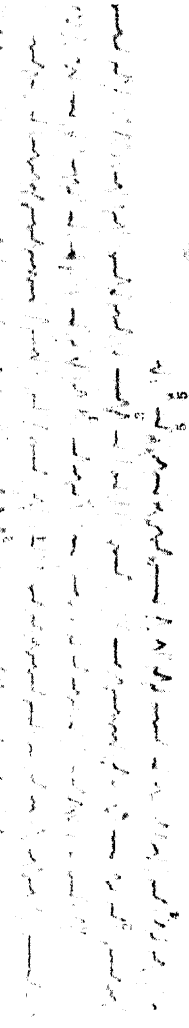
4 P.M.



7 P.M.



10 P.M.

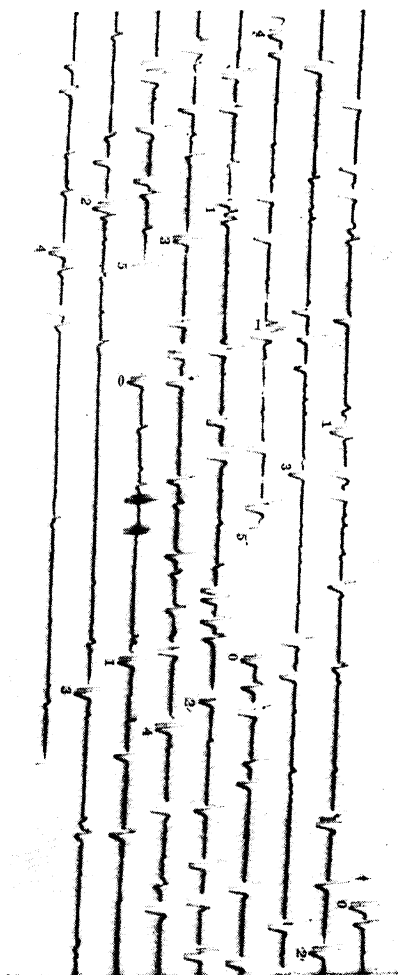


17-10-34.
Midnight.

18-10-34.

2 A.M.

4 A.M.

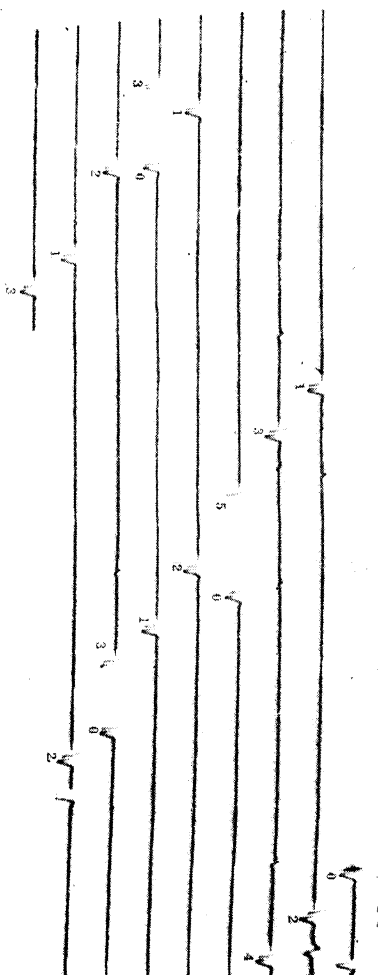


6 A.M.

8 A.M.

10 A.M.

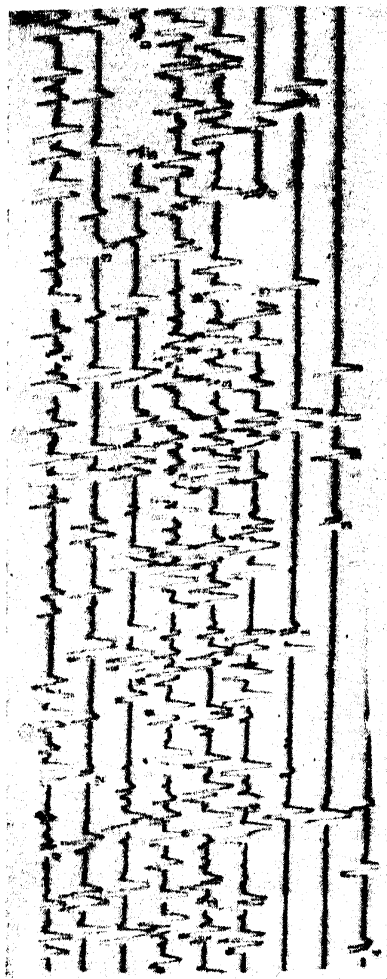
12 Noon.



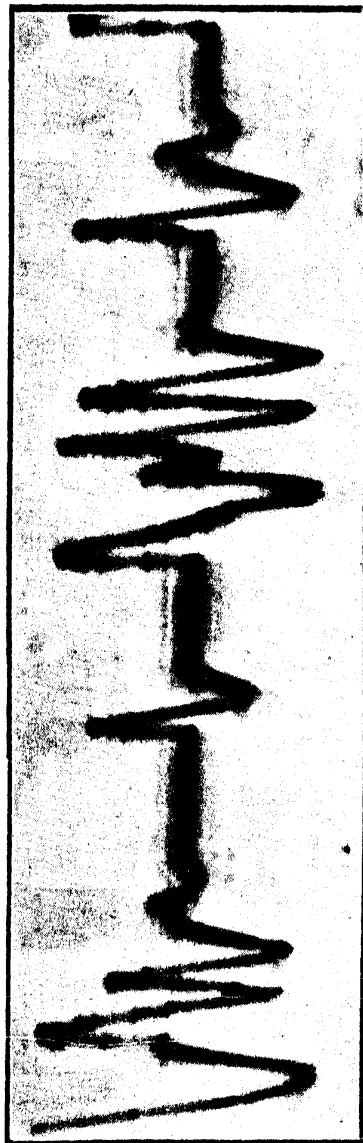
8-10-34.
10 P.M.

11 P.M.

9-10-34.
7-45 A.M.



Record of Atmospheres.



Enlargement of a section (at the end of the fifth minute) of the record taken at 11 P.M. on 8-10-34, showing the details clearly.

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4 a.m., while the occurrence of lighting only shows a maximum between 8 and 10 p.m. Over the land heat thunderstorms occur most frequently during the afternoons; but certain types associated with the line of separation between warm and cold air currents shows no special preference to day or night”.

The work of Watson Watt¹¹ carried out in England shows the correlation between the apparent sources of atmospherics and their meteorological environment. Of 490 cases examined, 25% fell within 250 kilometers of reported thunder, a further 28% were associated with more distant thunderstorms or with squall phenomena, 21% more with rain, 13% fell on barometric minima leaving 13% uncorrelated.

The origin of the atmospherics between the 13th and the 14th showing maximum activity at about 4 a.m. may be due to the “unsettled conditions in the Bay of Bengal which caused thunder-showers along the Madras Coast, lower Burma, Bombay, Bengal, Malabar and Ceylon”¹²

Those on the 7th, 8th, 9th and 11th showing maximum activity at about 4 p.m., may have their origin in the thunderstorms¹² reported from Assam, Central Provinces, Mysore etc.,

Similarly we may attribute the maximum activity between 8 and 10 p.m. on the 6th and 11th to atmospherics having their origin in lighting.

5. CONCLUSION.

The period during which the observations embodied in this paper were carried out is too short to justify any generalisations regarding the effect of atmospherics on wireless reception and as further observations are in progress. There is, however, one point which appears to be clearly borne out by the records, viz., the negative correlation, between the intensity and the number of atmospherics already discussed. In 80% of the curves given above a distinct negative correlation is indicated.

In conclusion, I have great pleasure in expressing my best thanks to Dr. S. Ramachandra Rao, Professor of Physics, Annamalai University, for facilities and encouragement, and to Dr. A. L. Narayan, Assistant Director, Kodaikanal Observatory, for some of the references. I have also to express my appreciation of the help rendered by Mr. P. S. Varadachari, Research student, and Mr. M. V. Subramaniam, Mechanic, Annamalai University in connection with the recording of atmospherics.

11. Proc. Phy. Soc., Lond., 37, 230, 1925.

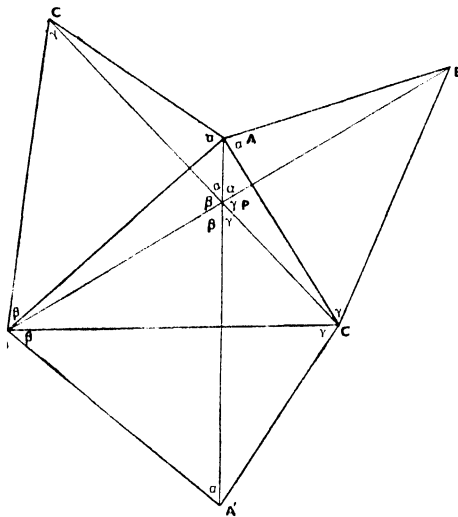
12. Indian Daily Weather Reports dated 7th to 19th Oct. 1934.

Median of Three Populations—A Simple Construction

By

G. V. KRISHNASWAMI AYYANGAR,
(Annamalai University)

Case of equal populations. Let A, B, C, be the three points of concentration. Then it is well known that the point for which the sum of the distances from the three points of concentration is least is such that $\angle APB = \angle BPC = \angle CPA = 120^\circ$. When such a point exists it is usually found by the intersection of the arcs of two circles. The point will exist if none of the angles of the triangle ABC is greater than 120° . It is called the Fermat point.



In this special case a simpler construction for finding the point is available. Let equilateral triangles be described on the sides of the triangle ABC externally to it. If A', B', C' be the vertices of these triangles (corresponding to the sides BC, CA, AB respectively), it is easy to show that AA', BB' and CC' are equal and concurrent. That this point is the Fermat point has been proved by analytical and vectorial methods.¹ It

1. See Morley and Morley, *Inversive Geometry*, p. 207.

is easy to obtain the result from very elementary considerations. For Q being any other point in the plane $QB + QC \geq QA'$. Therefore $QA + QB + QC \geq QA + QA' > AA'$ and $AA' = PA + PA' = PA + PB + PC$. That is, P is the Fermat point and the minimum distance of travel is AA' .

The Fermat point can therefore be obtained more simply as the intersection of the two straight lines AA' and BB' . When any one of the angles is greater than 120° , the point P so obtained will be outside the triangle and will not be the median. It is known that the vertex corresponding to the obtuse angle is the median then.

Case of unequal populations. This construction can be generalised to include the case of unequal populations. Let the populations T_1, T_2, T_3 at A, B, C be such that they could be represented by the sides of a triangle $\alpha\beta\gamma$ (say), α, β, γ corresponding to the sides T_1, T_2, T_3 respectively. In the special case treated above $\alpha\beta\gamma$ becomes equilateral. In the general case let triangles similar to $\alpha\beta\gamma$ be described on the sides of the triangle ABC externally in the following manner. In $A'BC$, the angle $A' = \alpha$, $\angle A'BC = \beta$, $\angle A'CB = \gamma$; in $B'CA$, the angle $B' = \beta$, $\angle B'CA = \gamma$, $\angle B'AC = \alpha$ and so on. [See Figure]. Join AA', BB', CC' . If AA' and BB' cut at P , the triangles ACA' and BCB' are similar and hence $PCA'B$ and $PCB'A$ are cyclic quadrilaterals. It is then easy to show that CC' also passes through P . The angles BPC, CPA, APB are respectively $\beta + \gamma, \gamma + \alpha, \alpha + \beta$ or $180^\circ - \alpha, 180^\circ - \beta, 180^\circ - \gamma$. P is thus the median required.²

That this is the median can be proved from elementary considerations. We have

$$BC/T_1 = CA'/T_2 = BA'/T_3; \text{ and}$$

$$PC \cdot BA' + PB \cdot CA' = PA' \cdot BC. \text{ Therefore}$$

$$T_3 \cdot PC + T_2 \cdot PB = T_1 \cdot PA' \text{ and}$$

$$T_1 \cdot PA + T_2 \cdot PB + T_3 \cdot PC = T_1 (PA + PA') = T_1 \cdot AA'.$$

Q being any other point in the triangle ABC , we have

$$QB \cdot CA' + QC \cdot BA' \geq BC \cdot QA'; \text{ that is}$$

$$T_2 \cdot QB + T_3 \cdot QC \geq T_1 \cdot QA'. \text{ Therefore}$$

2. Refer Eqn. 4, p. 60: Mr. S. Subramaniam, "On the Centre of Population," Journal of the Annamalai University, Vol. III, No. 1.

$$T_1 \cdot QA + T_2 \cdot QB + T_3 \cdot QC \geq T_1 (QA + QA') > T_1 \cdot AA'.$$

Hence P is the point for which the sum

$$T_1 \cdot PA + T_2 \cdot PB + T_3 \cdot PC \text{ is least.}$$

This point will possess this property only if it be inside the triangle ABC, (i.e.) if AA' , BB' , CC' are all within the arms of the angles of the triangle.³ If, for instance, α be greater than $180^\circ - A$, the lines BB' and CC' will fall outside the triangle and therefore P will be outside the triangle. That such a median should exist within the triangle, $\alpha + A$, $\beta + B$, $\gamma + C$ should all be less than 180° .

Whenever this condition is satisfied the position of the point P can be got as the intersection of two straight lines AA' and BB' , A' and B' being the vertices of triangles described on BC and CA similar to $\alpha\beta\gamma$ in the manner specified above. This construction appears to be much easier and less susceptible to error than the usual one of intersection of arcs of circles.

No construction is necessary for finding the median when (i) $\alpha + A$ or $\beta + B$ or $\gamma + C$ is greater than 180° and when (ii) the populations are such that they cannot represent the magnitudes of the sides of a triangle. In these cases the median is one of the vertices of the triangle.

The lines AA' , BB' , CC' are concurrent even if the triangles be described internally; this point is not considered here as it has no immediate practical application.

3. See my "Note on the Centre of Population," p. 279-282, Vol. III, No. 2, Journal of the Annamalai University, where it is shown that if the $\angle A > 180^\circ - \alpha$, A will be the centre.

On Linear Complexes corresponding to Subrational Pedal Quartics on a Quadric

By

K. RANGASWAMI,* (Research Student)
(Annamalai University)

1. Let $\Sigma(a_i + \rho)u_i^2 = 0$ ($i = 0, 1, 2, 3$) represent a pencil of class quadrics, referred to their common self polar tetrahedron Δ . We shall, for convenience, call such a pencil a "confocal system" (C. S.) of quadrics. The term "confocal" usually implies that the Absolute of the metrical three-space is a member of the quadric system; for our purpose it is unnecessary, however, to specify whether the Absolute is a proper or a singular quadric of the pencil or which particular quadric is chosen as the Absolute. Further, we shall refer to the member of the C. S. for which $\rho = 0$ as the quadric Q.

The locus of poles of a plane α with respect to the quadrics of the C. S. is a line a called¹ the *axis* of the plane α ; the plane α will be called the *normal plane* of a , and its pole with respect to Q, the *normal pole* of the axis a . The axis of a tangent plane to a quadric of the C. S. will be called the *normal* to this quadric at the point of contact with the plane. The totality of axes of the C.S. constitute a tetrahedral complex C_2 (Reye's complex of axes) having Δ for the fundamental tetrahedron. Since a quadratic complex has four lines in common with every regulus, there are four generators of each system on Q which are axes. These lines besides being generators of Q touch all other quadrics of the C. S. The normal planes of these eight generators, called the *cyclic planes* of Q, contain their axes and touch all the quadrics of the C. S.

Now, given any axis a , its polar line a' with respect to Q (more generally with respect to any quadric having Δ for a self polar tetrahedron) is also an axis. It can be shown that the normal planes α , α' of a , a' correspond to each other in a Cremona cubic plane transformation Γ of the desmic type, that is, the two planes are conjugate with respect

* I am indebted to Prof. A. Narasinga Rao for guidance and criticism in preparing this note.

1. Throughout this note, the notation and terminology are the same as that used in a paper on "The theory of normals to a Quadric" which will be published shortly.

to all the quadrics of a net inscribed to two tetrahedra Δ_1, Δ_2 forming with Δ a desmic-system. Since a will coincide with a' only when it is a generator of Q , it follows that the fixed planes of Γ are the eight cyclic planes of Q , while its singular planes are the faces of Δ . The lines of intersection of corresponding planes in the transformation Γ generate a cubic complex C_3 , which is constituted by the totality of generators of the net N of quadrics touching the eight cyclic planes of Q . If $p_{ij} = x_i y_j - x_j y_i$ are line coördinates, the cubic complex C_3 has the equation :

$$C_3: A_0 p_{01} p_{02} p_{03} + A_1 p_{10} p_{12} p_{13} + A_2 p_{20} p_{21} p_{23} + A_3 p_{30} p_{31} p_{32} = 0$$

where $A_0 = a_0/(a_0 - a_1)(a_0 - a_2)(a_0 - a_3)$ etc.

Thus, through each line a of C_3 there pass two planes α_1, α_2 whose axes a_1, a_2 are polar lines with respect to Q . If, however, a is an *axis*, the axes a_1, a_2 lie in the normal plane α of a , and hence α is the tangent-plane to Q at their point of intersection. Thus a being the axis of a tangent plane to Q is, by definition, a normal to Q . Hence the normals to the quadric Q of the C. S. belong both to the tetrahedral complex C_2 and the cubic complex C_3 associated with Q .

2. Any linear complex

$$C: \sum c_{ij} p_{ij} = 0 \quad (i, j = 0, 1, 2, 3)$$

determines a (2, 2) congruence whose lines belong both to C and the tetrahedral complex C_2 . The locus generated by the normal poles of the axes of this congruence is a quadric H circumscribed to Δ whose equation is

$$H: \sum c_{ij} (a_i - a_j) x_i x_j / a_i a_j = 0 \quad (i, j = 0, 1, 2, 3).$$

This quadric has been called the *Apollonian quadric* associated with the linear complex C (with the base quadric Q of the C. S.). Since the coefficients of H are linear in those of C , the correspondence between a linear complex and its associated Apollonian quadric is one-to-one.

From the definition of the Apollonian quadric it follows that the quartic curve in which the Apollonian quadric H intersects Q is the locus of points the normals at which to Q belong to the linear complex C . This quartic may be called the *pedal quartic* of the linear complex C . Further, we note that the unique member in the pencil of quadrics through the pedal quartic outpolar to Q is the Apollonian quadric associated with the linear complex C .

Now, if an Apollonian quadric H is doubly apolar to Q , it cuts out a subrational² pedal quartic on Q . From the equation of the Apollonian quadric it is easily seen that the constants of the linear complex satisfy, in this case, the relation :

$$A_0c_{23}c_{31}c_{12} + A_1c_{23}c_{02}c_{03} + A_2c_{31}c_{03}c_{01} + A_3c_{12}c_{01}c_{02} = 0$$

This is exactly the condition that $(C)^3 = 0$ may be apolar to the cubic complex $C_3 = 0$. We have thus the following main theorem of this note viz.,

The linear complexes corresponding to subrational pedal quartics on Q are apolar (in the above sense) to the cubic complex C_3 .

3. The geometrical significance of the apolarity of a linear complex C to the cubic complex C_3 is worthy of notice. Let Δ_1, Δ_2 be a pair of tetrahedra forming with Δ a desmic system. It is easily seen from equations that the two nets of linear complexes associated with Apollonian quadrics circumscribed to $(\Delta, \Delta_1), (\Delta, \Delta_2)$ are mutually apolar. Further, since the two nets of Apollonian quadrics have no common member, so are the nets of linear complexes. In such pairs of apolar nets of linear complexes, the regulus of lines common to either net are the directrices of special complexes of the other net. The two reguli determine uniquely a quadric Φ on which they constitute the two systems of generators. This quadric passes through the vertices of Δ_1, Δ_2 (hence it has Δ for a self polar tetrahedron) and contains the axes of the polar planes of the vertices of Δ_1, Δ_2 with respect to Q . These are the eight generators of Φ belonging to the tetrahedral complex C_2 , the generators through the vertices of Δ_1 belonging to one system and those through the vertices of Δ_2 belonging to the other system on Φ . As we vary the pair of tetrahedra Δ_1, Δ_2 we get different quadrics Φ , all having Δ for a self polar tetrahedron.

In particular, if Φ is any quadric of the net N (and in no other case) the vertices of the two tetrahedra Δ_1, Δ_2 inscribed in Φ lie also on Q . In other words, Q is circumscribed to the two desmic tetrahedra Δ_1, Δ_2 inscribed in a quadric of the net N . Since³ any two quadrics of different desmic nets are doubly apolar, the nets of Apollonian quadrics cir-

2. Subrational (2, 2) curves on a quadric S are those, which admit ∞^1 inscribed generator quadrangles of S . They are, necessarily, either the intersection curves or contact curves of S , with quadrics doubly apolar to it. (Vide "Cubic transformations associated with a desmic system" by Dr. R. Vaidyanathaswamy, supplement to *Jour. of the Ind. Math. Soc.*, Vol. XVII (1927), p. 83.)

3. Vide "Cubic transformations, etc. . . ." *loc cit.* p. 87.

cumscribed to (Δ, Δ_1) , (Δ, Δ_2) in this case, are doubly apolar to Q . Thus every linear complex C apolar to C_3 so that its associated Apollonian quadric is doubly apolar to Q contains a regulus of a quadric of the net N and, therefore, a regulus of C_3 .

4. If we represent a linear complex in [3] by a point of [5], by which the special linear complexes will be represented by the points of a quadric variety V in [5], to every point [5] there will correspond a linear complex on the one hand and hence also an Apollonian quadric. The equation $C_3 = 0$ will represent a cubic locus in [5] the points of which will correspond in [3] to linear complexes whose associated Apollonian quadrics are doubly apolar to Q . If Φ is any quadric of the net N and Δ_1, Δ_2 the unique pair of inscribed tetrahedra in desmic relation to Δ , the two nets of Apollonian quadrics circumscribed to (Δ, Δ_1) , (Δ, Δ_2) will correspond to two generating planes of C_3 in [5]. Further, since the linear complexes corresponding to these two nets of Apollonian quadrics form two mutually apolar nets, the two generating planes of C_3 in [5] are polar planes with respect to V . Thus the cubic locus C_3 in [5] has ∞^2 generating planes and is self reciprocal with respect to V .

Abnormal Flowers of *Cassia Fistula*, Linn

By

T. S. RAGHAVAN, AND K. R. VENKATASUBBAN,
(*Arumalai University*)

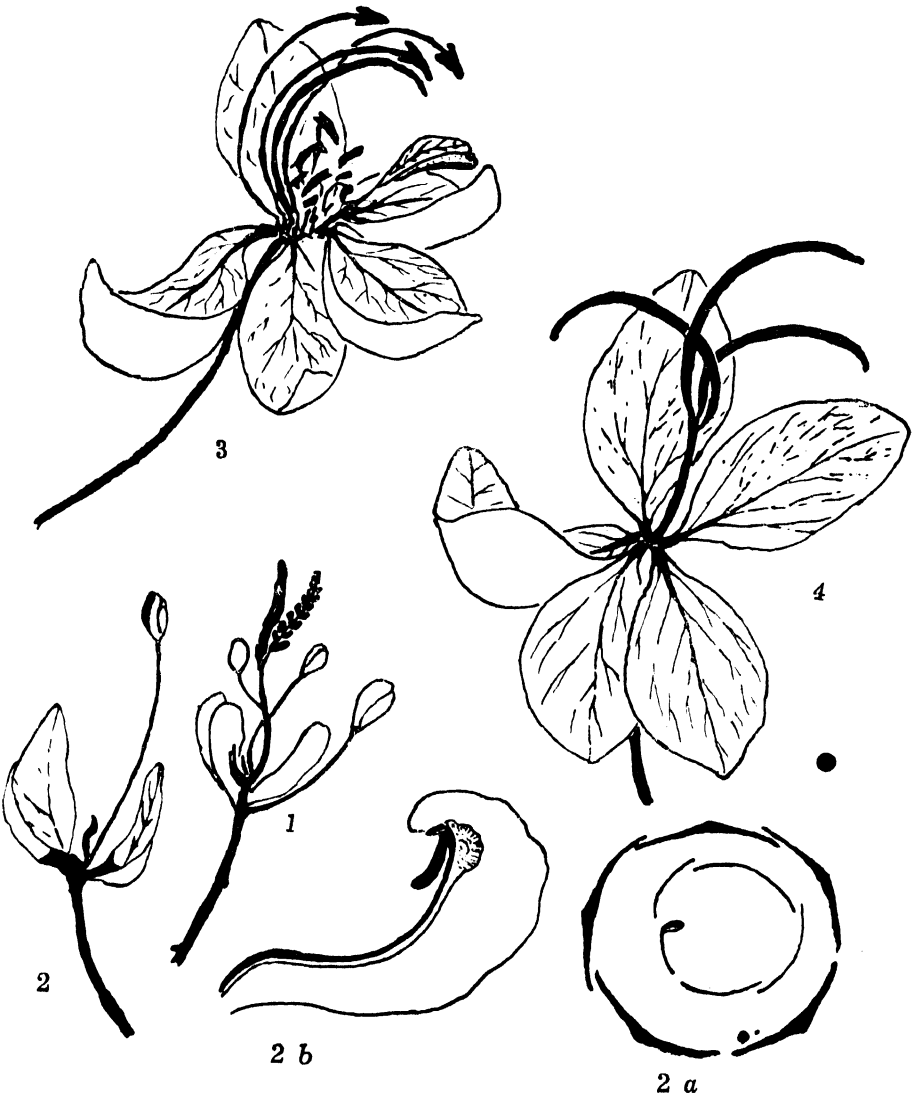
Last year, about this time, one of us (T. S. Raghavan) came across rather frequent cases of polyphyllly of the gynœcium in *Cassia fistula*, a phenomenon which Prof. Narasinga Rao of the Madras Presidency College had also observed. While examining the flowers of the same tree this year, with a view to ascertaining if the phenomenon had any bearing on seasonal changes or showed any periodicity, many types of abnormalities were met with which are recorded below. Reference to Masters¹ showed that the genus *Cassia* has not been known to exhibit any of the abnormalities herein noted.

[Proliferation is the production of buds (flower buds or leaf buds) either in the centre of a flower or axillary to some of the floral leaves.]

Median Floral Proliferation. (Fig. 1). The flower is admitted to be 'morphologically a determinate stem with appendages which are homologous with leaves'² which ceases to grow after the formation of the carpels. In such cases as these, it takes on new growth. Such median floral proliferations are said to be frequent in "plants with an indefinite inflorescence and where there is a stalk supporting the pistil" (Masters, p. 122). Occasionally it has been recorded in the Leguminosae (*Medicago*, *Pisum*, etc.), but in all such cases, the prolonged axes have been known to be terminated by a floral bud. In this case, however, the axis has grown into an inflorescence bearing a number of buds in a racemose manner. A part of the carpel is also found, in a modified condition, bearing few ovules, so that the question of "the pistil being metamorphosed into a stem bearing flowers" does not appear to arise (¹p 124) which conclusion

1. Masters (1869): *Vegetable Teratology* (Ray. Soc.).

2. Eames (1931): Refutation of the theory of carpel polymorphism. *Am. Jour. Bot.*, Vol. 18, p. 147.



seems to have been arrived at by some, on account of the frequent absence of carpels in cases of median proliferation. The median proliferation is not here accompanied by any other deviation in the floral parts, except for a slight alteration in their position.

Axillary Floral Proliferation. (Fig. 2). Here one normal flower bud springs from the axil of one of the anterior sepals. Associated with this is the suppressor of two of the 10 stamens, one of which is replaced by a staminode, while the other by one half of the anterior petal becoming antheroid (Figs. 2-a and 2-b). In *Cassia Fistula* staminodes occur frequently and how far these two changes noted here are correlated with the axillary floral proliferation cannot be said with certainty. "Partially antheroid" (1 p. 299) petals are said to occur occasionally and that in double flowers like *Orchis mascula*.

Polyphyly. (in which members of any particular whorl are increased in number).

Polyphyly of all the floral whorls has been met with in *Cassia fistula*.

(a) *Polyphyly of the Calyx.* Only one case has been met with where the number has been increased to seven and this was accompanied by the number of the other parts of the flower being proportionately increased. In this flower the numbers of the parts were:

Corolla	7	Stamens.	21
Calyx	7.	Carpels	7.

(b) *Polyphyly of the Corolla.* Two cases have been noted (besides the one previously mentioned). In one, it is unconnected with similar alteration in the calyx or stamens. In this, there were six petals, ten stamens, five sepals and a normal monocarpellary ovary. In the other, there were 7 petals and 12 stamens, there being no change either in the calyx or in gynoecium. Only in *Trifolium* in Leguminosæ has this been recorded.

(c) *Polyphyly of the Androecium.* Besides the flowers described in (a) and (b) another flower was met with (Fig. 3) in which there were 12 stamens, and this increased number was not accompanied by any corresponding alteration in other whorls. Associated with this is the petalody of one of the stamens. It is curious that only the anther has become petaloid, while the filament has not undergone any such change.

(d) *Polyphyllly of Gynoecium*. (Fig. 4). This is of rather frequent occurrence. Of the 220 flowers that were examined, about 28 showed this phenomenon. The carpel numbers were generally 2, 3, 4, 5 or 7. Except in one case where the number of carpels was 7 as noted in (a) in all other cases, the increase in the number of carpels was not associated with any corresponding increase in the other floral parts.

Discussion. The occurrence of bicarpellary pistil has been recorded in the closely allied genus *Saraca* by Krishnamurti,³ though the term polyphyllly is not applied by him. Rendle,⁴ says in connection with the pistil of the Leguminosæ; "Departures from a monocarpellary pistil are rare. *Toumatea dicarpa* (Caesalpinoideæ) has two carpels, while in several genera of the tribe Ingeæ (Mimosoideæ) there are more than one." Thus no mention has been made of the genus *Cassia*. The frequent occurrence of a polycarpellary gynoecium in a typically monocarpellary family can only be interpreted as a case of reversion, indicating the true Rosaceous ancestry of the Leguminosæ. In fact the single carpel in the Pruneæ is often regarded as leading on to the Leguminosæ. Besides this, the other abnormalities such as polyphyllly of the other floral whorls, petalody, staminody, etc., seem to throw some light upon the relationship of the Leguminosæ with the Polycarpiceæ. The relative primitiveness of the latter has been maintained by Arber and Parkin⁵ and recently supported by Hutchinson⁶ and others. Among other characters the following are some which determine the primitive position of the Polycarpiceæ:—(a) The spiral arrangement of the numerous floral members on an elongated floral axis. (b) Apocarpous carpels. (c) Sharp distinction between calyx and corolla may be wanting. (d) The ease with which stamens are transformed into staminodes or petals. The occurrence of most of these which are primarily to be regarded as cases of reversion, seems to establish the connection of the Leguminosæ with the Polycarpiceæ. Thus the "abnormalities" herein recorded seem to lend support to the view that the Leguminosæ have been evolved from a Polycarpiceous ancestry, through the Rosaceæ as the intermediate stage.

3. Krishnamurti (1931): A note on the occurrence of bicarpellary pistils in the flowers of *Saraca indica*. Jour. Ind. Bot. Soc., Vol. 10, p. 159.

4. Rendle (1925): The classification of flowering plants, Vol. II, p. 359.

5. Arber and Parkin (1907): On the origin of Angiosperms. Jour. Linn. Soc., London, Vol. 38, p. 29.

6. Hutchinson (1926): The families of flowering plants. London.

Magnetic Susceptibility of Sulphur and some Sulphur Compounds

By

P. S. VARADACHARI
(Annamalai University)

1. INTRODUCTION.

A thorough study of many sulphur compounds was originally done by Pascal.¹ A few compounds of sulphur were also studied by Farquharson² with the Curie-Cheneveau balance. He compared the experimental values obtained with the theoretical estimates based on the calculation of Angus³ and found that the difference was a paramagnetic term of about the same order of magnitude as the calculated paramagnetic term for the hydrogen molecule. Kido⁴ has also derived experimentally the susceptibilities of several incomplete ions of sulphur and noted a consistent divergence between his values and the theoretical figures of Angus. It was found that the paramagnetic component in the susceptibility of the ions increased in magnitude as the number of valency increased. A graph drawn between the ionic susceptibilities and number of valency of ions gave a straight line passing also through the value for atomic sulphur.

It is shown in another paper* that sulphuric acid-water mixtures show slight deviations from additivity. A maximum in the susceptibility was obtained at the concentration corresponding to $2\text{H}_2\text{SO}_4, \text{H}_2\text{O}$. It is reasonable to assume that when the ionic susceptibility is maximum the ions exist in the freest state. Hence the value of the SO_4^{--} has been calculated from the value of the susceptibility at this concentration. This enables us to determine the ionic susceptibilities of different cations with which it is in combination.

In the choice of the salts some have been taken with water of crystallisation. The susceptibility of the anhydrous salt has been calculated assuming the validity of the additive law of molecular susceptibilities.

* Under publication.

1. Comp. Rend., 3, 145, 1921.
2. Phil. Mag., 14, 1003, 1932.
3. Proc. Roy. Soc., 130, 573, 1932.
4. Tohoku Imp. Uny., Sci. Rep. 22, 835, 1933.

This procedure is justified in view of the fact that it has been shown that the decahydrate of sodium sulphate does not show any change in value when the crystal is heated to over 33° at which temperature it is known to dissociate into the anhydrous salt and water. A concentrated solution of the salt in water also failed to indicate any changes in susceptibility on heating to over 33°C . This at once indicates that in the hydrated salts normally, the binding between the salt and the water molecule is loose and this does not affect the magnetic susceptibility to any measurable extent. This case in fact, is one where a change might be expected since the hydrate is proved to exist even in solution and there is a definite transition point. The difference between a hydrate in solution and in the solid state lies in this that while in the former type a linkage very like a chemical bond is involved, in the latter case, crystalline forces play an important role in binding the water molecules to the solute molecules. That water of crystallisation might be present in the solid state without involving any chemical linkages is proved by the fact that the inert gases, which are incapable of combining with other molecules, do crystallise out with water of crystallisation, at very low temperatures.

The foregoing considerations show that the assumption of the validity of the additive law of molecular susceptibility is valid in the case of the hydrated salts. Ray Chaudhuri⁵ however, investigating the hydrated and non-hydrated salts finds that the additive law is not obeyed. He observes a large decrease from the additive value and the decrease is greater, the greater the heat of formation of the compound. Such a result seems to be doubtful in the light of the foregoing considerations. Besides the mixtures, stannic chloride-acetic acid and stannic chloride-ethyl formate investigated by Kido⁶ do not show any changes from additivity despite the fact that in both the mixtures compounds are formed attended with a large evolution of heat.

These considerations point out clearly the justification for the calculation of the susceptibility value of the anhydrous salt from that of the hydrated salt. The ionic susceptibility is then calculated by assuming the susceptibility of -38.89 for the SO_4^{-} -ion.* One of the aims of this paper is to show that the ionic values calculated with these assumptions are in good agreement with the values obtained by Kido from solution or non-hydrated salts and by Hocart⁷ from solution.

5. Zeits f. physik, 1932, 77, 271.

6. Tohoku Imp. Uni., Sci. Rep., 21, 385, 1932.

* The value has been taken from the paper under publication.

7. Comp. Rend., 188, 1151, 1929.

Sulphur is well known to exist as a sexivalent ion in sulphuric acid and the sulphates. The susceptibility value of the bivalent ion has also been estimated from measurements on carbon-disulphide. In view of the high purity with which this liquid is available the value of the susceptibility determined may be taken to be precise. Measurements have also been attempted on sodium and potassium sulphides; but since the actual composition of the substances used is a matter of some doubt no ionic values have been deduced therefrom. It may be mentioned that so far no measurements seem to have been made of the alkaline sulphides.

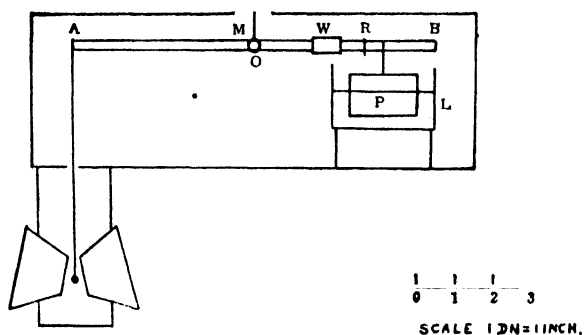
A study has also been made of the different allotropic modifications of sulphur. Rhombic and monoclinic varieties of sulphur have been studied by Bhatnagar and Mathur.⁸ Their result is in general confirmed. The γ sulphur or the plastic variety has also been prepared and the susceptibility determined. The change of susceptibility when the plastic type is converted into the rhombic form has also been investigated.

2. EXPERIMENT.

Measurements of susceptibility were made with a Curie balance. Fig. 1 shows the experimental arrangement used. AB is a light aluminium strip suspended by means of a fine copper wire No. 40 S.W.G. The wire is fixed at the top to a torsion head II by which delicate adjustments during retorsion could be made. At the end A the test bulb is suspended by a silk fibre. A counterpoising weight W and a smaller rider R are placed on the arm OB. By adjusting their positions the beam could be made exactly horizontal and small up and down movements to the test bulb could be given by altering the position of the rider. P is a plate attached to the arm OB and dipping in some oil contained in a glass basin L. A concave mirror M of focal length one metre is fixed at O. The arm and the suspension wire were enclosed in a wooden case with glass front to prevent air currents from disturbing the balance during observations. By adjusting a lamp and scale a circular spot of light with a vertical wire was obtained on the transparent scale.

Determination of the position at which the magnetomotive force on the test bulb was maximum was obtained by studying the deflections along the line of symmetry between the pole pieces. At the place where the force was maximum, investigations were also made in a vertical direction. The region where this force was maximum was then defi-

nately fixed. The angle between the pole faces was so arranged that a flat maximum was obtained in the horizontal direction.



The salts used were of the purest quality obtained from Kahlbaum or Merck. The containers were thin stoppered glass bulbs. The deflections of the bulbs were noted with and without the substances. The retorsion method was employed, the reading being brought back to the same position to within a centimetre. An average deflection of about 10 cm. was obtained in most cases for the substances. The value of the mass susceptibility of each substance as derived from the different observations on the substance agreed to within $\frac{1}{2}$ per cent.

The magnet was a large one of Pye's type capable of carrying 16 amperes. The readings were taken at a current strength of 5 amperes.

The standard substance used was water the diamagnetic susceptibility of which was assumed to be 0.72.**

* In this paper all the susceptibility values must be multiplied by 10-

The substances were weighed with an accurate Sauter's balance, the error in the masses determined being 0.1 milligram.

3. RESULTS.

(a) *Sulphates.* The results obtained for a few sulphates are tabulated below :—

TABLE I.

Substance.	Mass susceptibility.	Molecular susceptibility.	Molecular susceptibility of anhydrous salt.
$2\text{H}_2\text{SO}_4, \text{H}_2\text{O}^*$	0.424	90.74	(38.89)
$\text{Li}_2\text{SO}_4, \text{H}_2\text{O}$	0.428	54.75	41.79
Na_2SO_4 (anhydrous)	0.324	46.03	46.03
K_2SO_4 „	0.384	66.92	66.92
$\text{Mg SO}_4, 7\text{H}_2\text{O}$	0.555	136.8	46.08

The value of 38.89 for the diamagnetic susceptibility of SO_4^{--} ion is found to agree remarkably well with the value of 39 obtained by Kido and Farquharson. Using this value the ionic diamagnetic susceptibilities of Li^+ , Na^+ , K^+ , and Mg^{++} have been calculated. The results obtained here along with those of other investigators are given below :—

TABLE II.

Ion.	Angus (Theory)	Joos ⁹	Pascal & Pauling ¹⁰	Kido	Ikenmeyer ¹¹	Pascal ¹²	Author
Li^+	0.665	1.3	0.2	1.6	4.0	4.2	2.90
Na^+	3.74	6.5	5.2	7.6	10.4	10.2	7.14
K^+	13.06	14.5	14.5	13.6	16.0	18.5	14.02
Mg^{++}	2.89	—	—	4.3	4.5	10.1	7.19

* Loc cit.

9. Zeits. f. physik, 19, 347, 1923.

10. Proc. Roy. Soc., 114, 181, 1927.

11. Ann. Der Physik, 1, 169, 1929.

12. Comp. Rend., 158, 37, 1914; 159, 429, 1914; 173, 144, 1921.

It will be noted that the results obtained by the author are in good agreement with those of other investigators particularly when mutual agreement among the values given by them is not very striking. In fact the author's values come almost midway between those of Ikenmeyer and of Joos. It should also be remembered that the results of Ikenmeyer were obtained for the alkali halides in solution. Van Vleck has pointed out that the molecular susceptibility for an inert gas should be intermediate between those of the corresponding halogen and alkali ions which should be respectively greater and smaller. However, it is seen from the table that the values given by any particular author do not conform to this rule.

It will be seen from the foregoing conclusions that the ionic susceptibilities of the alkali ions calculated from hydrated salts agree with those obtained from experiments with solutions or dehydrated salts. This confirms the conclusions reached earlier and justifies the assumptions made in the calculation of the ionic susceptibilities.

(b) *Sulphides.* The diamagnetic susceptibility of carbon disulphide was found to be 0.565 and the molecular susceptibility works to 43.01. The value given in the International Critical Tables is 0.54 giving a molecular susceptibility of 41.1 and Kido's calculated value would be 47.4. If we accept the susceptibility value of +7.4 for C^{++} we should get for S^{-2} the value -25.2. Similarly if the diamagnetic susceptibility value of O^{-2} is taken as 13.7, the ionic susceptibility of S^{+6} as calculated from the susceptibility of the SO_4^{--} ion works to +15.91. The specific diamagnetic susceptibilities of Na_2S , $9H_2O$ and K_2S were found to be 0.614 and 0.362 respectively.

(c) *Allotropic modifications of sulphur.* A large quantity of powdered sulphur was dissolved in pure carbon disulphide and the liquid allowed to evaporate. Rhombic sulphur crystallised out in orthorhombic pyramids.

Powdered sulphur was molten in a crucible and then allowed to solidify. When the mass had partially solidified the still liquid portion was poured off. Thus prismatic needles of sulphur of the monoclinic variety were obtained.

Plastic sulphur was prepared by pouring boiling sulphur in a thin stream into cold water. A tough elastic material was obtained and it was dried between filter paper. It was then kept inside a desiccator and exhausted to remove all water.

It is well known that the plastic variety passes slowly into the rhombic form in the course of a few days. This change can be brought about within a short time by melting the mass. In the experiments readings were taken with the plastic form and bulbs were heated to about 120°C and cooled. The deflections were again noted. This indicated changes in susceptibility if any and thus provides one with a sure test for examining whether the amorphous and the crystalline varieties have different values.

TABLE III.

Form.	Author	Bhatnagar & Mathur.	Owen.
	χ	χ	χ
Rhombic	0.481	0.487	0.485
Monoclinic	0.469	0.462	—
Plastic	0.473	less than 0.487	—
Plastic after heating.	0.480	—	—

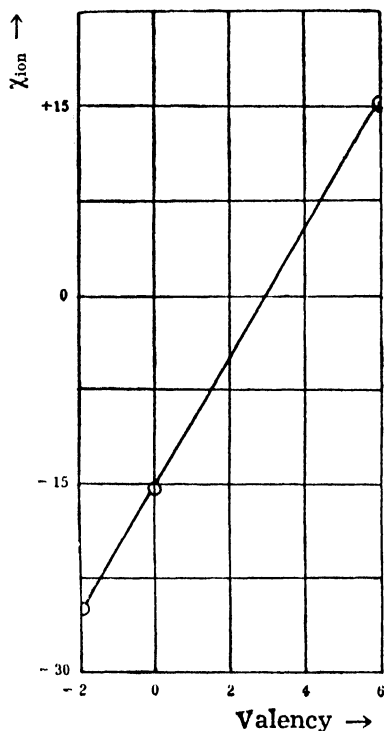
From the table it is seen that there is qualitative agreement between the results of Bhatnagar and Mathur and the author. The plastic form on heating gains in susceptibility and attains the value of the rhombic variety. The diamagnetic susceptibility value of plastic sulphur indicates that the so-called plastic sulphur may be a mixture of the rhombic and the monoclinic varieties.

It is well known that in the case of metals the allotropic modifications of any metal have different susceptibilities. In the case of tin, for example, it is known that white tin is paramagnetic while grey tin is strongly diamagnetic. A large difference in susceptibility exists between the two allotropic modifications of phosphorus though it is a non metal. The white form has a diamagnetic susceptibility of 0.9 while the red form has a value of only 0.67.

In the table are collected the values for the different ions of sulphur.

Ion.	Angus.	Kido.	Author.
S^{+6}	+ 1.31	+ 15.0	+ 15.4
S^0	—	— 16.0	— 15.4
S^{-2}	— 32.63	— 27.4	— 25.2

It is seen from the table that there is a large departure from the theoretical value especially for the higher valency. However, the points plot themselves on a straight line as indicated in the accompanying figure.



4. SUMMARY AND CONCLUSION.

(a) The diamagnetic susceptibilities of crystalline sulphates of Li, Na, K, Mg have been determined from the solid state by the Curie balance. The ionic susceptibility of Li^+ , K^+ , Na^+ , and Mg^{++} calculated from the magnetic values of the hydrated salts assuming the additive law agree reasonably well with the values of other investigators. This shows that the nature of the bond between the water molecules and the sulphate ion is a loose one and does not influence the susceptibility of the molecule appreciably. The values of the susceptibility for some sulphides have been determined. (b) The allotropic modifications of sulphur have also been investigated magnetically. A small difference is noted between the values of the rhombic and monoclinic varieties. Plastic sulphur gives an intermediate value which rises up to the value for the rhombic

form when heated to 120°C and cooled. It is thus likely that the so-called plastic variety is a combination of the other two modifications. (c) A graph drawn between the susceptibility of different incomplete sulphur ions and the valency of sulphur gives a straight line, thus confirming Kido's result.

In conclusion, I take this opportunity to thank Dr. S. Ramachandra Rao, for his keen interest and continued help throughout the course of this investigation. My thanks are also due to the authorities of the Annamalai University for the award of a studentship.

The Gastric Armature of some South Indian Decapod Crustacea

By

A. RAMAKRISHNA REDDY
(Annamalai University)

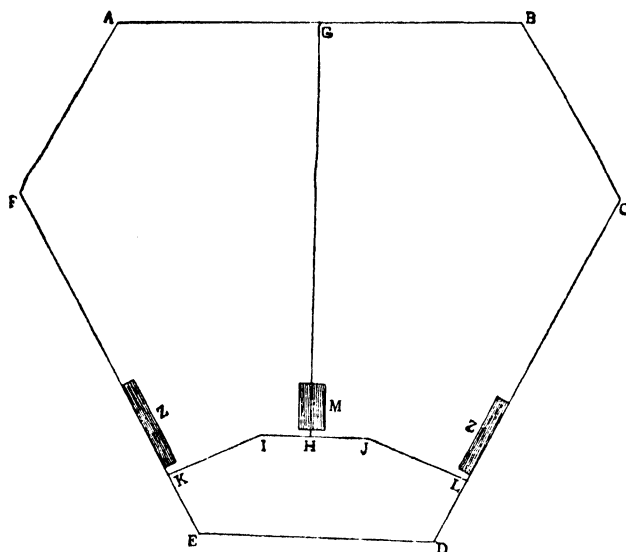
INTRODUCTION

The gastric armature of decapods is a very complicated mechanism which varies in its structural details in the different genera. Its structure in some of the European forms viz., *Cerataspis monstrosus*, *Nephrops norvegicus*, *Astacus fluviatus*, *Cancer pagurus*, *Stenorhyncus* and *Portunus*, has been dealt with by Bonier, Meek (6) Huxley (3), Pearson (8), Mocquard (7) and Vitzou (11) respectively. But very little attention seems to have been paid to its study in the Indian forms. The present paper deals with a comparative account of the gastric armature in the following South Indian forms :—

1. *Gelasimus annulipes*, Latreille.
2. *Paratelphusa* (*Oziotelphusa*) *hyrodromus*, Herbst.
3. *Neptunus pelagicus*, (Linnaeus).
4. *N. sanguinolentus*, Herbst.
5. *Matuta victor*, Fabricius.
6. *Albunea symnista*, (Linnaeus).
7. *Diogenes custos*, Fabricius.
8. *Diogenes diogenes*, Herbst.
9. *Clibanarius longitarsis*, de Haan.
10. *C. olivaceus*, Henderson.
11. *C. acquabites*, Dana.
12. *C. arethusa* De Man.
13. *C. infraspinctus*, Hilgendorf.
14. *Penaeus indicus*, Milne-Edwards.

In all these forms the mechanism of the gastric armature is fundamentally similar. It is divisible into two main parts, namely (1) a masticatory apparatus composed of a hexagonal arrangement of thickly chitinised sclerites bearing sharp teeth and (2) a straining apparatus constituted by (a) the complicated arrangement of profuse setae carried by the pectinal system of ossicles, (b) the ampullary, inter-ampullary

and supra-ampullary ridges present in the pyloric lumen and (c) the cardio-pyloric valve. The straining devices are mostly concentrated in the pyloric division, whereas the masticatory structures are mainly confined to the cardiac division. The masticatory sclerites are formed by the thickening and calcification of certain regions in the chitinous lining of the foregut and are worked by a system of anterior and posterior gastric musculature. The following are the main sclerites and their relative positions are diagrammatically represented in Text—fig. 1.



TEXT FIG. 1. Schematic representation of the relative arrangement of the ossicles of the gastric armature. A.B. Meso-cardiac ossicle; A.F. Ptero-cardiac ossicle; B.C. Ptero-cardiac ossicle; C.D. Zygo-cardiac ossicle; D.E. Pyloric ossicle; E.F. Zygo-cardiac ossicle; G.H. Uro-cardiac ossicle; I.J. Pro-pyloric ossicle; K.J. Exo-pyloric ossicle; L.J. Exo-pyloric ossicle; M. Median tooth; Z. Zygo-cardiac or later teeth.

- (i) The mesocardiac ossicle,
- (ii) A pair of pterocardiac ossicles,
- (iii) A pair of zygo-cardiac ossicles bearing the lateral teeth,
- (iv) The pyloric ossicle bearing a denticle,
- (v) A pair of exopyloric ossicles,
- (vi) The propyloric ossicle,
- (vii) The urocardiac ossicle bearing the median tooth.

In the cardiac and the pyloric chambers, besides these main ossicles, constituting the gastric armature proper, there are a set of ossicles—

"the supporting ossicles"—which give attachment to the muscles of the foregut. In most cases these "supporting ossicles" of the cardiac chamber are variously modified and constitute an efficient straining mechanism.

The *modus operandi* of the armature is interesting. It represents a complicated system of seven levers of the second order whose mechanical constitution resolves the force of a single straight pull, resulting from the contraction of the anterior or posterior gastric muscles, into four convergent forces acting at many points. The lines of action of these four forces are along (a) the urocardiac ossicle with its median tooth, (b) the two zygocardiac ossicles with their lateral teeth and (c) along the pyloric ossicle with its chitinised and pointed anterior end, which can be regarded as the ventral tooth from its relative ventral position during the operation of the various ossicles. It is the collision of these four teeth-bearing ossicles that brings about the efficient mastication of food. The crushing power produced by the collision is so great that even the hard shells of molluscs are reduced to minute pieces. The resistance of the cardio-pyloric constrictor muscles is mainly responsible for the restoration of the armature to its original condition. The mode of working of the gastric armature differs in the various forms, depending on the disposition of the propyloric ossicle.

The structure and disposition of the median tooth and the urocardiac ossicle vary considerably. The arrangement of setae is in no two cases similar. The pectinal system of ossicles shows different kinds of modifications. With reference to the shape and nature, the denticles carried by the masticatory structures also vary. The gastric musculature exhibits slight variation. The variations are apparently correlated with the nature of the food of the animal.

THE GASTRIC ARMATURE OF *GELASIMUS ANNULIPES*, LATR.

The Mechanism of Mastication :—It is composed of two distinct sets of ossicles, namely, the ossicles of the cardiac chamber and the ossicles of the pyloric chamber. The ossicles of each chamber form two definite categories, namely, the main ossicles and the supporting ossicles.

The cardiac division of the stomach is a simple spherical and spacious chamber exhibiting a number of thickenings in its cuticular lining. The ventral surface of the cardiac chamber is invaginated posteriorly giving rise to the cardio-pyloric valve which separates the cardiac chamber from the pyloric.

The mesocardiac ossicle is a triangular piece of sclerite transversely placed in the anterior region of the dorsal wall of the

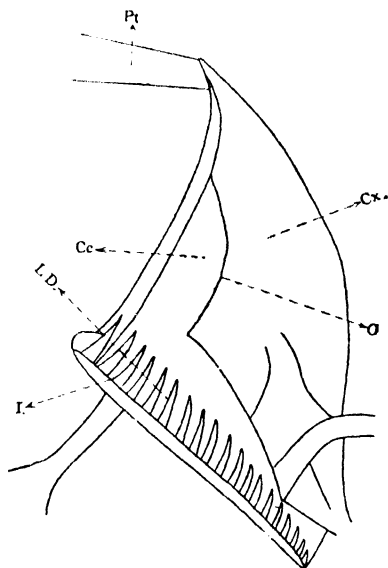
cardiac chamber. Its broader end is posteriorly directed and is not distinctly separated from the urocardiac ossicle and from the pterocardiac ossicles. The posterior end curves dorsally as well as ventrally and serves for the attachment of the cardio-pyloric constrictor muscles.

The urocardiac ossicle is attached to the hind end of the mesocardiac ossicle and projects posteriorly along the dorsomedian line. It exhibits posteriorly a ventral inclination, and on reaching the cardio-pyloric passage, gives articulation to the anterior extremity of the propyloric ossicle. Just in front of this articulation it bears ventrally the large median tooth. The ossicle as well as the tooth show five to six transverse ridges with intervening concavities. Running at right angles to these, is a longitudinal ridge. In *Cerataspis monstrosus*, described by Bonier, the median tooth is simple, short, recurved and not carried on any specialised structure like the urocardiac ossicle. Further it does not show any differentiation in its structure. In *Nephrops norvegicus* and *Astacus fluviatus* it is borne at the posterior extremity of the urocardiac ossicle, but in the former it is a conical structure and in the latter is triradiate. In *Cancer pagurus*, Pearson (8) describes it as a large and blunt structure.

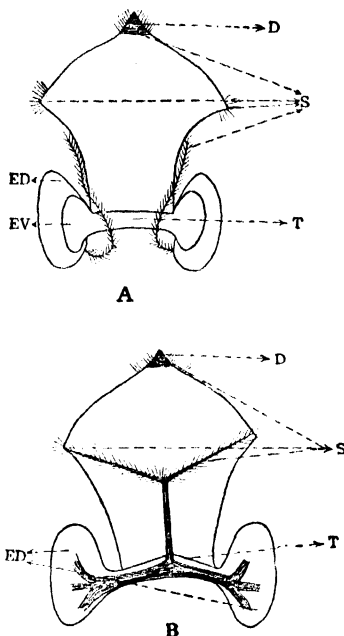
The pterocardiac ossicles are a pair of ossicles attached to the mesocardiac ossicle on either side by means of oblique hinges. Their inner ends which are in contact with the mesocardiac ossicle are broader and taper towards their outer extremities. The anterior gastric muscle bands are attached to the inner, broader ends of the pterocardiac ossicles. The outer extremities of each pterocardiac ossicle articulate with the zygo-cardiac ossicle by means of a ligament which Pearson (8) describes as the antero-lateral ligament. The posterior border of the pterocardiac ossicles is straight, but the anterior is slightly curved.

The zygo-cardiac ossicles are a pair of lateral ossicles articulating with the outer ends of the pterocardiac ossicles on either side. They pass posteriorly showing a marked ventral inclination as they proceed. The posterior extremity articulates with the exopyloric ossicle which is attached to the propyloric ossicle, thereby connecting the pyloric region with the cardiac. They are narrow at their anterior attachment, attaining their maximum breadth at the place where the lateral teeth are given off. The inner border is curved ventrally whereas the outer margin is bent inwards, so that the ossicle presents a concavity towards the inside and a convexity towards the outside. The outer border of the ossicle is folded resulting in a deep groove immediately below the outer convexity. Though the

ossicle is in reality thin, yet by means of this complicated folding it creates a false impression of thickness. The ridges and the denticles carried by the inner border of this zygo-cardiac ossicles form the lateral



Text Fig. 2.



Text Fig. 3.

TEXT FIG. 2. The Zygo-cardiac ossicle and the lateral tooth of *Gelasimus annulipes*, Latr. Cc. Concavity; Cx. Convexity; I. Inner border; L.D. Denticles of the lateral tooth; O. Outer border; Pt. Ptero-cardiac ossicle.

TEXT FIG. 3. The pyloric ossicle of *Gelasimus annulipes*, Latr. A. Ventral view; B. Dorsal view; D. Denticle; E.D. Dorsal extension; E.V. Ventral extension; S. Setae; T. The transverse, chitinous bar-like structure.

teeth. The dorsal or outer border of the ossicle is entirely beyond the field of action of the masticatory sclerites. The posterior border is in continuation with the exopyloric ossicles.

The lateral teeth are formed by the anterior and inner borders of the zygo-cardiac ossicles and consist of a number of ridges and denticles. They lie on either side of the median tooth at the cardio-pyloric entrance. On each lateral tooth there are a number of very short denticles which are very closely set. The pointed ends of these denticles project freely as the teeth of a comb and probably during the process of mastication they fit into the concavities which intervene the

transverse continuous ridges on the median tooth and urocardiac ossicle. All the denticles are of uniform structure and become gradually short as they proceed from the posterior to the anterior end.

In the case of *Cerataspis montrosus* the lateral teeth are represented by longitudinal rows of cuticular thickenings of the lateral folds of the gastric chamber. In the *Astacus fluviatus* and *Nephrops norvegicus* they are not so specialised. In *Cancer pagurus* there is a single large denticle anteriorly, which is followed by seven smaller denticles, and the folded inner edge of the zygocardiac ossicle is traversed by as many as twenty-four transverse ridges.

The cardiac ossicles, in general, resemble those of *Cancer pagurus*. They mainly contribute to the constitution of the complicated straining devices.

The pyloric chamber is comparatively smaller in size and the posterior part of its cavity is very much reduced by the thickening of its ventral chitinous lining into the pyloric ampullae, whereas the anterior part, about a fourth of the whole chamber, is free and spacious. When the foregut is dissected, two swellings become conspicuous ventrally in the gastric region. These indicate the ampullary zone of the pyloric chamber.

A pair of ampullary ridges occupy the posterior three-fourths of the pyloric region. The chitinous lining of the ampullae is produced into a number of parallel, longitudinal ridges which are profusely beset with setae. These setae are so situated that their free ends are opposed to the direction of the food passage and they are profusely branched. According to Vitzou (11), the setae occurring in the gastric region are not true setae, having no central cavity characteristic of the true setae, but are simply cuticular extensions.

The floor of the chamber along the mid-ventral line is raised into a ridge, the inter-ampullary ridge, on either side of which, and in close contact with, are two pyloric ampullae.

Immediately above the pyloric ampullae along the ventro-lateral line, the wall of the pyloric chamber is produced into a pad like structure on each side. These are also profusely supplied with long setae. These are the supra-ampullary ridges. They extend so far as to meet in the middle line thus marking out a partially separated ventral and dorsal regions in the pyloric lumen. The ventral region between the supra-ampullary ridges and the pyloric ampullae is further subdivided into two equal and similar parts by the development of the inter-ampullary ridge along the mid-ventral line of

the floor of the pyloric chamber. The dorsal division of the posterior three-fourths of the pyloric region is fairly spacious.

The anterior one-fourth of the pyloric chamber is in free communication with the posterior dorsal division, whereas the communication between the posterior ventral division and the anterior region is very much restricted by the ampullary ridges and the profuse setae projecting from them into the very narrow, ventral region of the pyloric lumen.

The exopyloric ossicles are a pair of sclerites which are situated on either side of the posterior extremity of the propyloric ossicle and in articulation with it. Each is triangular in shape, the base being in contact with the posterior border of the zygocardiac ossicle, while the apex articulates with the posterior border of the propyloric ossicle.

The propyloric ossicle is roughly triangular in shape and attached by means of its narrow anterior border to the posterior extremity of the urocardiac ossicle immediately below the attachment of the median tooth. The broader hind end gives articulation to the exopyloric ossicles on either side. The ossicle is considerably depressed in the centre. Its hind border is entire and not bifurcated as in the case of *Cancer pagurus*. The ossicle is fairly well calcified both in the centre and at the periphery and not membranous as in the case of *Cancer*. The cardio-pyloric muscles extend between the posterior border of the ossicle and the mesocardiac ossicle.

The pyloric ossicle lies in the mid-dorsal line in the pyloric chamber. It occupies completely the anterior one-fourth of the pyloric region. The central portion of the ossicle is not so well calcified as the margins. The anterior extremity is pointed and thickly calcified and produced into a denticle which may be called the ventral tooth. On either side of this denticle can be discerned tufts of setae. Posteriorly the margin is calcified to form a transverse bar. This transverse bar on either side is produced into a dorsal and a ventral extension. The dorsal one is broader than the ventral and is attached to the hind end of the subdentary ossicle of its side. The ventral extension is attached to the posterior ends of the post-pectinal and the infero-lateral-cardiac ossicles of its side. The pyloric ossicle appears as if it were suspended by these three pairs of cardiac supporting ossicles.

In the case of *Cerataspis monstrosus* the pyloric region is not differentiated into definite ossicles. In *Astacus fluviatus* the structure

and relative arrangement of these is entirely different. The subdentary ossicles are immovably attached on either side of the pyloric ossicle, and the propyloric shows bifurcation. In *Cancer pagurus* the pyloric ossicle is membranous in the centre and is calcified laterally showing the paired nature of its origin.

The pyloric supporting ossicles are not in any way concerned with the straining mechanism of the armature. The position and structure of these ossicles are similar to those of *Cancer pagurus* a detailed account of which was given by Pearson (8).

The Mechanism of Straining:—The straining apparatus or filter is constituted by (i) six pairs of setose cardiac supporting ossicles, namely:—

- (a) a pair of pre-pectinal ossicles,
- (b) a pair of pectinal ossicles,
- (c) a pair of post-pectinal ossicles,
- (d) a pair of lateral cardio-pyloric ossicles,
- (e) a pair of infra-lateral cardiac ossicles, and
- (f) a pair of subdentary ossicles,

and by (ii) the setose, parallel longitudinal ridges of the ampullary, inter-ampullary and supra-ampullary folds of the pyloric lumen.

Each pre-pectinal ossicle in its outline follows the inner curve of the zygocardiac ossicle of its side, and on reaching the position of the median tooth, is much broadened and attached to the funnel shaped pectinal ossicle. The broadened region is beset with setae. The inner border of the pectinal ossicle is produced into seven or eight, very short, chitinous denticles, the infra-lateral cardiac teeth. The two rows of infra-lateral cardiac teeth are on either side of the median tooth and parallel to it. During the operation of the armature, they evidently fit into the concavities intervening the transverse ridges on the median tooth, thus cleaning the median tooth.

The pectinal ossicle sends backwards a rod-like structure, the post-pectinal ossicle, which, at its posterior end, is attached to the ventral extension of the transverse pyloric bar. The entire course of the ossicle is beset with setae which are directed anteriorly. The pectinal ossicle is also attached to the lateral cardio-pyloric ossicle at its hind end. Posteriorly the lateral cardio-pyloric ossicle sends backwards a rod-like structure, the infra-lateral cardiac ossicle which lies parallel to the post-pectinal ossicle. It extends as far as the hind end of the post-pectinal ossicle and is also attached to the ventral

extension of the pyloric bar. There are long setae lining its entire course. It is dorsal in position to the post-pectinal ossicle, but ventral to the subdentary ossicle. Its upper end is in contact with the subdentary ossicle.

The subdentary ossicle is movably attached to the outer dorsal border of the zygocardiac ossicle anteriorly. Posteriorly it is broadened and supplied with numerous long setae, and finally attached to the dorsal extension of the transverse pyloric bar.

The setae on the ampullary, inter-ampullary and supra-ampullary ridges are directed anteriorly so as to oppose the food current. The spacious dorsal division of the pyloric lumen is capable of being completely separated from the ventral division by the approximation of the two supra-ampullary ridges. Further the membranes extending between the various ossicles are also supplied with setae. No such straining device is present in *Cerataspis monstrosus*. In *Astacus fluviatus*, *Nephrops norvegicus* and *Cancer pagurus* the arrangement is quite different.

The Musculature of the Gastric Armature:—It is divisible into two types, viz., the extrinsic and intrinsic muscles. In the case of the extrinsic system the muscles run from the ossicles of the gastric armature inside the foregut to the skeletal system outside the foregut. In the case of the intrinsic muscles, they run between the different ossicles of the armature within the foregut itself.

The Extrinsic Musculature:—The anterior gastric muscles extend between the inner ends of the pterocardiac ossicles and the anterior region of the carapace. They are separated into two distinct bands. They diverge considerably as they proceed anteriorly.

There are three bands of posterior gastric muscles. The inner or the central band proceeds from the pyloric ossicle to the posterior region of the carapace. The outer bands proceed from the dorsal surface of the hind ends of the zygocardiac ossicles to the posterior region of the carapace.

The cardiac levator muscles are a pair of bands extending between the lateral walls of the cardiac chamber and the carapace. The pyloric levator muscles extend between the lateral walls of the pyloric chamber and the posterior region of the carapace. There is a pair of cardiac depressor muscles which extend between the ventro-lateral wall of the cardiac chamber and the anterior region of the sternum, the pyloric depressor muscles proceed ventrally from the ventro-lateral wall of the pyloric chamber.

The Intrinsic Musculature:—The cardio-pyloric constrictors are on the posterior of the mesocardiac ossicle and posteriorly on the posterior border of the propyloric ossicle. They are in three bands, the outer of which diverge slightly towards their insertion on the propyloric ossicle.

There are three pairs of lateral cardiac muscles. The dorsal pair extends between the dorsal border of the zygocardiac ossicle and the upper region of the infra-cardiac ossicle. The central pair extends between the upper region of the infra-cardiac ossicle and the prepectinal ossicle. The ventral pair extends from the lateral surface of the infra-lateral cardiac ossicle to the dorsal surface of the posterior lateral cardiac plate.

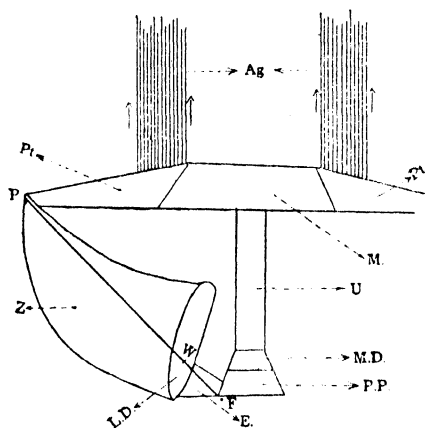
The cardiac constrictors are formed by two sets of muscles, the postero-lateral cardiac muscles and the antero-lateral cardiac muscles. The postero-inferior cardiac muscles extend between the two posterior ends of the infra-lateral cardiac ossicles. One end of the antero-lateral cardiac muscles is inserted on the anterior wall of the mesocardiac ossicle just above the insertion of the cardio-pyloric constrictor muscles, while the two divisions of the opposite, bifurcated end are attached separately to the anterior, lateral cardiac plate. Both these sets of muscles lie between the cardiac depressors and the cardiac elevators.

The pyloric constrictor muscles are in the form of a number of small bands extending from the postpectinal and infra-lateral cardiac ossicles to the supporting ossicles of the dorsal and lateral walls of the pyloric chamber.

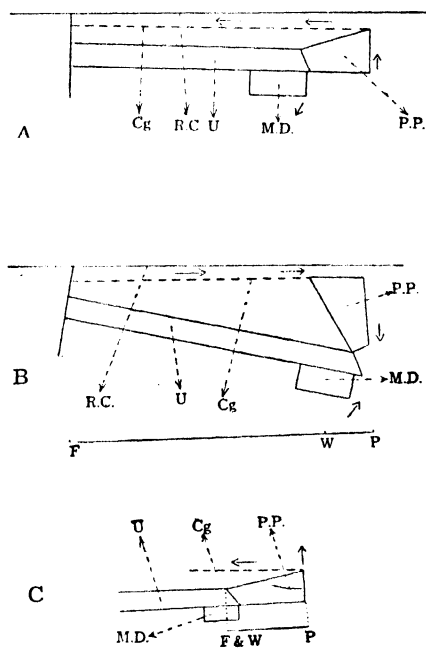
The modus operandi of the gastric armature:—The active movement of the armature seems to be entirely brought about by the anterior gastric muscles, as described by Mocquard (7) in the case of a living *Stenorhyncus* having a transparent carapace. Huxley (3), however, states that the operation is effected both by the anterior and the posterior gastric muscles in the case of *Astacus fluviatus*. As we shall see later on, the action seems to differ in different forms, depending mostly on the disposition of the propyloric ossicle in relation to the urocardiac ossicle.

When the anterior gastric muscles contract, some very striking changes are effected in the gastric armature. The pterocardiac ossicles are drawn forwards dragging along with them the mesocardiac and the urocardiac ossicles. The median tooth is also drawn forwards. The propyloric ossicle, when the armature is at rest, is in the same plane as the urocardiac ossicle, with its narrow anterior end articulating

with the hind end of the urocardiac ossicle, and the broader, hind end being posteriorly directed. When the mesocardiac ossicle is thrown forwards, the cardio-pyloric constrictor muscles pull the posterior border of the propyloric forwards, so that the propyloric ossicle assumes a



Text Fig. 4.



Text Fig. 5.

TEXT FIG. 4. The diagram to illustrate action of Zygo-cardiac ossicle of *Gelasimus annulipes*, Latr. Ag. Anterior gastric muscles; E. Exo-pyloric ossicle; F. Fulcrum; L.D. Lateral tooth; M. Meso-cardiac ossicle; M.D. Median tooth; P. Power; Pt. Ptero-cardiac ossicle; P.P. Pro-pyloric ossicle; U. Uro-cardiac ossicle; W. Weight; Z. Zygo-cardiac ossicle. The arrows indicate the direction of the action.

TEXT FIG. 5. Diagrammatic representation of the mode of action of urocardiac ossicle and pro-pyloric ossicle of *Gelasimus annulipes*, Latr. A. Position of the uro-cardiac and pro-pyloric ossicles at rest; B. Position of the same during action; C. Shows the action of pro-pyloric ossicle only; Cg. Cardio-pyloric constrictor muscles; F. Fulcrum; M.D. Median tooth; P. Power; P.P. Pro-pyloric ossicle; R.C. Roof of the Cardiac chamber; U. Uro-cardiac ossicle; W. Weight.

Arrows Indicate the direction of action.

vertical position. Owing to the presence of the roof of the cardiac chamber, the ossicle, while assuming a vertical position, presses downwards the posterior extremity of the urocardiac ossicle bearing the median tooth. Thus, as a result of the propyloric interference, a for-

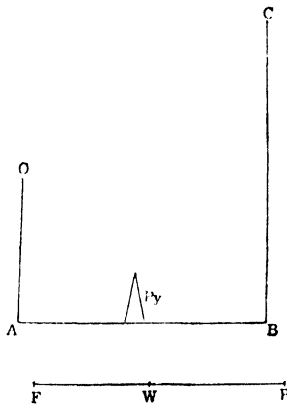
ward and downward movement is imparted to the median tooth, thus forcing it to collide with the zygocardiac ossicles bearing the lateral teeth. The downward movement of the median teeth would not be possible but for the propyloric mechanism. Both the urocardiac and propyloric ossicles represent levers of the second order. In the case of the urocardiac ossicle, the fulcrum is situated at its attachment with the mesocardiac ossicle. The power is applied at its hindermost extremity just behind the median tooth, by the anterior border of the pyloric ossicle. In fact, the power is the result of the contraction of the anterior gastric muscles, and transferred to that point. The work is done in the region of the median tooth.

In the case of the propyloric ossicle, the fulcrum is at the attachment of its anterior border with the hind end of the urocardiac, and power is applied by the cardio-pyloric constrictor muscles at its posterior border. Work is done at a point near the fulcrum in pressing down the median tooth.

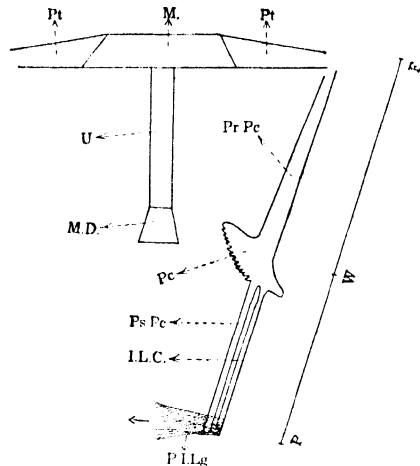
The pterocardiac ossicles, in their forward movement, drag forwards with them the zygocardiac ossicles with their lateral teeth. Since the posterior border of the zygocardiac ossicles, just below the lateral teeth, is attached to the posterior border of the propyloric ossicle, the zygocardiacs are drawn upwards when the posterior border of the propyloric rotates upwards. The result is that a forward and upward movement is imparted to the lateral teeth, thus bringing them to collide with the median tooth which is forced downwards and forwards. Now if we consider the zygocardiac and exopyloric ossicles as one single piece we have a lever of the second order, the fulcrum being at the posterior end at the place of articulation of the exopyloric with the propyloric ossicle and the weight being in the region of the lateral tooth. The power is applied at the anterior end at its attachment to the pterocardiac ossicle. The power in this case also is due to the contraction of the anterior gastric muscle.

Simultaneously with this movement, there is the forward movement by the pyloric ossicle which is drawn forwards by the pectinal system of ossicles whose posterior ends are attached to the ventral extension of the pyloric, transverse chitinous bar. The fulcrum is at the anterior end of the subdentary ossicle which is attached to the posterior end of the zygocardiac ossicle dorsally. The posterior end of the subdentary ossicle is immovably attached to the dorsal extension of the pyloric bar. Work is done by the pyloric ossicle which is in between the two extensions. Thus by the contraction of the anterior gastric muscles, the four tooth-bearing ossicles are made to collide.

The original position is attained by these ossicles, partly by the relaxation of the anterior gastric muscle, and partly by the resistance of the posterior gastric and cardio-pyloric constrictor muscles.



Text Fig. 6.



Text Fig. 7.

TEXT FIG. 6. To show the action of the pyloric ossicle of *Gelasimus annulipes*, Latr. A.B. The transverse chitinous, bar-like structure of the ossicle; B.C. Pectinal system of ossicles; D.A. Subdentary ossicle; F. Fulcrum; P. Power; Py. Pyloric ossicle; W. Weight.

TEXT FIG. 7. To illustrate the action of the pectinal system of ossicles carrying the infra-lateral cardiac teeth of *Gelasimus annulipes*, Latr. I.L.C. Infra-lateral cardiac ossicle; Pc. Pectinal ossicle; Pr.Pc. Pre-pectinal ossicle; Ps.Pc. post-pectinal ossicle; P.I.L.g. Posterior infra-lateral cardiac muscles. The rest of the lettering is as in Text Fig. 4.

The pectinal ossicles bearing the infra-lateral cardiac teeth do not seem to come into action during the play of the principal ossicles. During the action of the principal ossicles they are concerned only in drawing forward the pyloric ossicle. Their activity appears to commence just after the cessation of the activity of the main ossicles. When the armature is restored to its condition of rest, the postero-inferior cardiac muscles which are attached to the posterior borders of the infra-lateral cardiac ossicles contract. Since the post-pectinal ossicles are fused with the infra-lateral cardiac ossicles both at the posterior and anterior ends, the contraction of the above muscles draws together the pectinal ossicles, so that the infra-lateral cardiac teeth meet in the middle line just above the median tooth, brushing it as

they come together. The teeth clean the furrows of the median tooth and serve to keep the median tooth ready for the next action. The infra-lateral cardiac teeth are brought back to their original position by a contraction of the lateral cardiac system of muscles which extend between the dorsal border of the zygo-cardiac ossicles and the anterior region of the infra-lateral cardiac ossicles.

If we consider the pectinal and the infra-lateral cardiac ossicles as one single piece, we have again a lever of the second order, the fulcrum being at the anterior extremity of the pre-pectinal ossicle at its articulation with the outer end of the pterocardiac ossicle. The work is turned out in the region of the infra-lateral cardiac teeth, while power is applied by the postero-inferior cardiac muscles at the hind ends of the ossicles. Thus the entire operation falls into two distinct types. (1) The action of the main system of ossicles, and (2) the action of the supporting system of ossicles. The two actions alternate. The former is concerned with the crushing of the hard food materials, while the latter is concerned with the clearing away of the crushed material from the furrow of the main teeth-bearing ossicles, thus preparing them for the next action. The first action is effected mostly by the extrinsic system of muscles, while the second one is brought about entirely by the intrinsic muscles.

Pearson (8) suggests that, in *Cancer pagurus*, the separation between the soft nutritious parts and the hard shell-like structures belonging to animals taken in as food is effected to a certain extent in the anterior spacious division of the pyloric chamber. In *Gelasimus annulipes* the concrescence of the supra-ampullary ridges effects complete separation of the dorsal and ventral regions of the posterior pyloric chamber. Owing to the resistance offered by the profuse setae present on the ampullary ridges in the ventral division, the bigger hard pieces are forced into the dorsal division, whereas only very minute soft food material passes through the ventral division. There are some flap-like structures projecting backwards from the hind end of the dorsal division of the posterior pyloric lumen. Huxley (3) and Mocquard (7) suggest that these flap-like structures act as valves in preventing the contents of the mid-gut from passing into the fore-gut; but Pearson (8) and Cuenot (2) state that these structures are concerned in carrying the hard shell-like pieces from the dorsal division directly into the hind gut. Thus the mid-gut which is without any chitinous lining suffers no risk or damage. The minute soft food material which is sieved through the setae present in the ventral division of the pyloric lumen, comes into contact with the secretions of the digestive glands at the posterior end of this region just above its entrance into the mid-gut.

THE GASTRIC ARMATURE OF *PARATELPHUSA*
(*OZIOTELPHUSA*) *HYDRODROMUS* (HERBST).

The Mechanism of Mastication:—The cardiac chamber is constructed like that of *Gelasimus*; but the ossicles vary in structure.

The mesocardiac ossicle resembles that of *Gelasimus*. There is a slight constriction in the centre and the anterior end is ventrally inclined.

The urocardiac ossicle shows no deviation but the median tooth is different. It is differentiated into three regions. There is an anterior crescentic denticle and a much broader posterior denticle with a concavity between them. In front of the anterior denticle there is a semi-circular depression in the centre of which is situated a minute sharp denticle.

The pterocardiac ossicles resemble those of *Gelasimus*.

Each of the zygocardiac ossicles ends anteriorly in two knob-like structures, the inner of which is attached to the outer end of the ptero-cardiac ossicles. The outer ones are attached to the anterior ends of the prepectinal ossicles. The ossicles are very narrow and rod-like at their anterior ends, becoming gradually broad towards their hind ends. On reaching the position of the median tooth they give rise to the highly chitinised lateral teeth. Posteriorly the dorsal border of the ossicles articulates with the exopyloric ossicles.

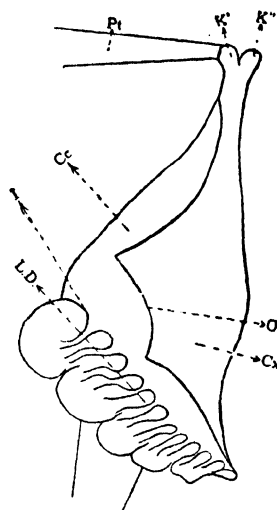
Each lateral tooth carries eight or nine hard denticles with intervening concavities. The entire denticulated region falls into three or four main lobes, the denticles on them being of different types varying in shape and sharpness.

The cardiac supporting ossicles and the pyloric chamber are like those of *Gelasimus*.

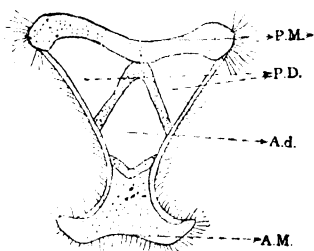
The position of the exopyloric ossicles is different due to the different disposition of the propyloric ossicle.

The propyloric ossicle shows deviation both in structure and disposition. The broader posterior border is rotated to the anterior side, so that its position at rest resembles the position of the propyloric ossicle of *Gelasimus* during action. The exopyloric ossicles are attached to the posterior border and therefore displaced from the position described in *Gelasimus*. This variation in position is responsible for the difference in the mode of action of the entire gastric armature. The ossicle is provided with setae and shows two depressions posteriorly,

and one anteriorly. The posterior end is bifurcated and thickened. The anterior narrow border is attached to the hind end of the uro-cardiac ossicle.



Text Fig. 8.



Text Fig. 9.

TEXT FIG. 8. The Zymo-cardiac ossicle of *Paratelphusa (oziotelphusa) hydrodromus*, Herbst. K'. Inner knob-like termination of the anterior end of the ossicle; K''. Outer knob-like termination. The rest is as in Text Fig. 2.

TEXT FIG. 9. The pro-pyloric ossicle of *Paratelphusa (oziotelphusa) hydrodromus*, Herbst. A.D. Anterior depression; A.M. Anterior margin; P.D. Posterior depression; P.M. Posterior Margin.

The pyloric ossicle is similar to that of *Gelasimus* but there is no transverse chitinisation which gives rise to the transverse bar-like structure in *Gelasimus*. The ossicle shows depression along its median line and the anterior end is not as pointed as that of *Gelasimus*, but is more chitinised.

The pyloric supporting ossicles resemble those of *Gelasimus*.

The mechanism of straining:—The straining apparatus is constituted by (i) five pairs of setose cardiac supporting ossicles, namely,

- (a) the pre-pectinal ossicles.
- (b) the pectinal ossicles.
- (c) post-pectinal ossicles.
- (d) the lateral cardio-pyloric ossicles.
- (e) the infra-lateral cardiac ossicles.

and by (ii) the ampullary ridges which are profusely beset with setae.

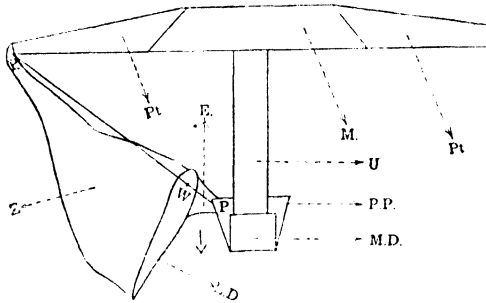
The sub-dentary ossicle does not seem to take part in the composition of the filter.

The anterior ends of the pre-pectinal ossicles articulate with the outer knob-like structures of the anterior ends of the zygocardiac ossicles. They follow the zygocardiac ossicles and gradually become broad at their attachment to the pectinal ossicles. The pectinal ossicles are cup shaped structures bearing towards their inside the infra-lateral cardiac teeth, which are in a level with the lateral teeth on either side of the median tooth. Laterally the pectinal ossicles are attached to the lateral cardio-pyloric ossicles and posteriorly to the infra-lateral cardiac and the post-pectinal ossicles which lie parallel to each other. There are eight to nine sharp denticles on each lateral cardiac tooth. At the position of the lateral cardio-pyloric ossicles the setae are arranged to form brush-like structures rubbing the lateral teeth. Both the infra-lateral cardiac ossicles and the post-pectinal ossicles are thickly beset with setae throughout their entire course. The disposition of the setae is opposed to the direction of the food current. The infra-lateral cardiac ossicles, on reaching the hind end of the pyloric chamber, end in oval setose brushes at the entrance of the fore-gut into the mid-gut. The post-pectinal ossicles on reaching the same place turn up slightly and then bend down ending in anteriorly directed, long, elliptic brushes. These brushes reach as far as the cardio-oesophageal passage. The arrangement of the setae on the ampullary ridges and the membranes extending between the various ossicles is as in the case of *Gelasimus*.

The musculature of the gastric armature resembles that of *Gelasimus*.

The working of the gastric armature seems to be brought about, as Huxley (3) suggested, both by the posterior and the anterior gastric muscles. The peculiar disposition of the propyloric ossicle in the different forms accounts for these differences in the mode of operation. The collision of the ossicles is mainly brought about by the posterior gastric muscle, while the anterior gastric muscle and the cardio-pyloric constrictor muscles are concerned in bringing back the armature to its original condition. If the anterior gastric muscles were mainly responsible for the collision of the ossicles as suggested by Macquard (7) one of the most essential factors, namely the pressing down of the median tooth to meet the colliding zygocardiac teeth could not be accomplished owing to the reverted disposition of the propyloric ossicle. To force the median tooth downwards, the posterior border of the propyloric ossicle, which is bent over to the anterior side, has

to be pulled backwards. This is possible only by the contraction of the posterior gastric muscle. The dorsal border of each zygocardiac ossicle is attached posteriorly to the anteriorly directed posterior border of the propyloric ossicle, on either side, by means of the exopyloric ossicles. Since the posterior gastric muscles are attached to the exopyloric ossicles, the muscles, when they contract, draw the zygocardiac ossicles



Text Fig. 10.

TEXT FIG. 10. To show the action of the Zyo-cardiac ossicle of *Paratelphusa* (*oziotelphusa*) *hydrodromus*, Herbst. The lettering is as in Text Fig. 4.

and the propyloric ossicle backwards. The net result is that the urocardiac ossicle with its median tooth is pulled backwards and forced down by the propyloric ossicle to meet the zygocardiac teeth which are also made to collide by the same contraction.

Now if we consider the exopyloric ossicle and the zygocardiac ossicle of each side as one single bar, we have a lever of the second order. But unlike that of *Gelasimus* the fulcrum is at the anterior end, at the place of its articulation with the outer end of the pterocardiac ossicle. The weight is in the region of the lateral tooth and the power is acting at the exo-pyloric ossicle.

In the case of the propyloric ossicle also we have a lever of the second order. The power acts at the posterior border of the ossicle, while the fulcrum and the weight are at the opposite side of the ossicle, which is attached to the hind end of the urocardiac ossicle. The action of the urocardiac ossicle and the pectinal system of ossicles is similar to that of *Gelasimus*. As in the case of *Gelasimus*, the action of the supporting ossicles alternates with that of the main ossicles. The separation of hard structures in the food-material is effected in the same manner as in *Gelasimus*.

The pterocardiac ossicles show no deviation from the types described before.

The zygo-cardiac ossicles are narrow anteriorly but become very broad towards the posterior border. Towards the middle of their course they are much calcified and from this region the calcification proceeds towards the lateral teeth in the form of three parallel ridges.

Anteriorly there is one very big denticle in the lateral tooth. This is followed by a second denticle which is comparatively smaller than the first. These two are followed by a number of small sharp denticles. The cardiac supporting ossicles resemble those of *Paratelphusa*. The pyloric chamber shows no deviation. The exopyloric and propyloric ossicles resemble those of *Paratelphusa* both in structure and disposition. The pyloric ossicle exhibits its paired origin remarkably. It is very much elevated both along its midventral and mid-dorsal lines. The anterior conical end does not show any marked chitinisation as in the case of *Gelasimus* and *Paratelphusa*. The pyloric supporting ossicles are like those of previous forms.

The mechanism of straining is composed of the same elements as those of *Paratelphusa*. But here, as in the case of *Gelasimus*, the subsidiary ossicle is setose. The prepectinal ossicle does not become broad posteriorly as in the previous forms. The pectinal ossicle differs from the previous ones in being very small and bears the infra-lateral cardiac teeth which are composed of four long pointed denticles. These denticles are very poorly calcified and the anterior-most denticle is the longest, while the others gradually decrease in size towards the posterior end.

The musculature and the mode of operation of the gastric armature are similar to those of *Paratelphusa*.

THE GASTRIC ARMATURE OF NEPTUNUS SANGUINOLENTUS HERBST.

The cardiac and pyloric chambers and their ossicles are similar to those of *Neptunus pelagicus*. But some portions of the membranes extend dorsally between the ossicles of the cardiac chamber and are calcified, thereby increasing the efficiency of mastication.

Straining is effected on the same lines as in *Neptunus pelagicus* except that there are six denticles in the infra-lateral cardiac teeth. As in the above, the denticles decrease in size from the anterior to the posterior end. The musculature and the working of the armature are like those of *Paratelphusa*.

THE GASTRIC ARMATURE OF *MATUTA VICTOR FABR.*

The cardiac and the pyloric chambers resemble those of *Neptunus*. The membranes extending between the ossicles are not calcified. The straining apparatus is constructed on the same lines as those of *Neptunus* and *N. sanguinolentus*. But the subdentary ossicle, as in the case of *Paratelphusa*, is not beset with setae. The musculature and the working of the gastric armature resemble those of *Paratelphusa*.

THE GASTRIC ARMATURE OF *ALBUNEA SYMNISTA* (LINN.)

The cardiac chamber resembles those of the previous forms. The meso-cardiac ossicle is broader in front than behind and is depressed anteriorly. Laterally it is produced into the pterocardiac ossicles, and posteriorly into the urocardiac ossicle. The separation is very indistinct.

The urocardiac ossicle is not very much calcified. It is broader in the middle. The anterior end at its attachment to the mesocardiac ossicle is tapering, while the posterior end first tapers and immediately broadens out at its attachment to the median tooth.

The median tooth is fairly chitinated and consists of a single blunt denticle which is crescent shaped. The convexity of the denticle is directed towards the anterior end.

The pterocardiac ossicles resemble those of *Paratelphusa*.

The zygocardiac ossicles are not as well developed as those of *Paratelphusa*.

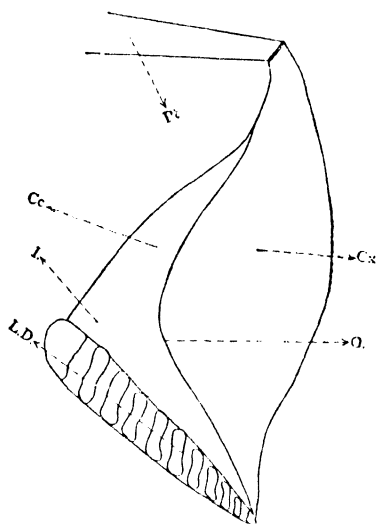
The structure of the denticles on the lateral teeth is uniform unlike those of *Paratelphusa*. But their size decreases as they proceed from the anterior to the posterior end.

The cardiac supporting ossicles are considerably modified and very much differ from those of the previous forms, both in structure and function.

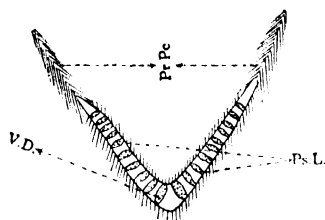
The pyloric chamber and its ossicles are similar to those of the previous forms. The anterior end of the propyloric ossicle is profusely beset with setae which brush against the median tooth. The pyloric ossicle is not well developed as in the previous forms, but is in the form of a cuticular plate. The pyloric supporting ossicles exhibit no deviation.

The straining is mainly effected by setose ampullary ridges of the pyloric chamber. The pre-pectinal, pectinal and post-pectinal and infra-lateral cardiac ossicles, which in the previous forms constitute

the main frame work, are here modified to give rise to a V-shaped masticatory structure. All these ossicles are fused into a single piece, and, posteriorly, the hind ends of the two fused post-pectinal and infra-



Text Fig. 13.



Text Fig. 14.

TEXT FIG. 13. The Zymo-cardiac ossicle of *Albunea symnista*, (Linnaeus). The lettering is as in Text Fig. 2.

TEXT FIG. 14. The 'V'-shaped masticatory structure of *Albunea symnista*, (Linnaeus). Pr.Pc. Pre-pectinal ossicle; Ps.L. The fused post-pectinal and infra-lateral cardiac teeth forming the masticatory structure; V.D. The row of denticles.

lateral cardiac ossicles are fused together, thus giving rise to a V-shaped structure. The free ends of this are the anterior terminations of the pre-pectinal ossicles which are articulated with the outer ends of the pterocardiac ossicles. This structure bears a row of teeth dorsally. These gradually diminish in size as they proceed from the junction of the two fused ossicles on either side to the free ends of the structure. Ventrally there are setae. The denticles extend only as far as the hind end of the prepectinal ossicle. This structure is concerned in mastication rather than in straining. The musculature of the armature resembles those of the previous forms except in that the posterior gastric muscles are inserted mainly in the posterior dorsal borders of the zygo-cardiac ossicles and the exopyloric ossicles. The working of the armature is different, being correlated with the development of the V-shaped masticatory structure. The fused pectinal system of ossicles which has given rise to this structure

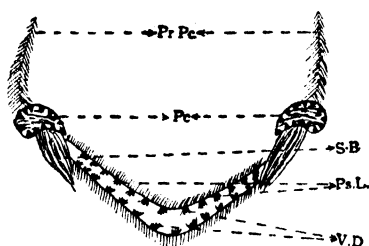
operates simultaneously with the other teeth-bearing ossicles and thus differs from the pectinal system of the ossicles of the previous forms whose working alternates with the working of the main ossicles. It is worked by the posterior infra-lateral cardiac muscles and the lateral cardiac muscles. The denticles of the V-shaped masticatory structure are ventral to the median tooth. In this case also we have a lever of the second order. The fulcrum is at the place of attachment of the pre-pectinal ossicles with the outer ends of the pterocardiac ossicles. The weight is in the region of the row of denticles carried by this structure and the power is applied posteriorly.

Since the median tooth is simple without any furrows on it, there is no possibility of any fresh food-material sticking on it. So there is no need for any mechanism to clean it and hence the structures, which in the previous forms, are mainly concerned in the cleaning of the furrowed median tooth, are here modified for a masticatory function. The rest of the working of the gastric armature shows no deviation.

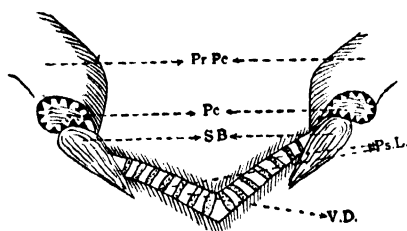
THE GASTRIC ARMATURE OF *CLIBANARIUS LONGITARSUS*,
de HAAN.

The cardiac and the pyloric chambers and their ossicles resemble those of *Albunea* in most respects except in the shape and the structure of the mesocardiac and the urocardiac ossicles and the median tooth.

The mesocardiac ossicle is very well developed and comparatively big. It is comparatively broadened at the median line and suddenly tapers to give rise on either side to the pterocardiac ossicles. It is indistinctly separated from the pterocardiac ossicles but marked off from the urocardiac ossicles. The urocardiac ossicle narrows posteriorly and to this the median tooth is attached. The median tooth is bi-convex and surrounded by setae projecting from the anterior end of the propyloric ossicle. The straining is effected as in the case of *Albunea*. Here also the pectinal system of ossicles is modified to give rise to the V-shaped masticatory structure; but the modification is slightly different. The pectinal ossicles on either side are quite distinct and they carry the infra-lateral cardiac teeth, just below which there is a setose brush. Posteriorly the infra-lateral cardiac ossicle and the post-pectinal ossicle are fused together. The two arms of the V-shaped structure are more divergent than in *Albunea*. Dorsally the structure bears sharp denticles, while the ventral surface is setose. The musculature and the mode of operation of the armature is similar to that of *Albunea*.



Text Fig. 15.



Text Fig. 16.

TEXT FIG. 15. The 'V'-shaped masticatory structure of *Diogenes custos*, Herbst. Pc. Pectinal ossicle; S.B. Setose bush-like structure. The rest is as in Text Fig. 14.

TEXT FIG. 16. The 'V'-shaped masticatory structure of *Clibanarius longitarsis*, Henderson. The lettering is as in Text Figs. 14 and 15.

THE GASTRIC ARMATURES OF *CLIBANARIUS AQUABITES* de DANA
C. OLIVACEOUS HENDERSON, *C. ARETHUSA* de MAN, AND
C. INFRASPINCTUS HILGENDAT.

All these resemble the previous form. But in the case of *C. infraspinctus*, the membranes extending between the ossicles of the cardiac chamber are calcified.

THE GASTRIC ARMATURE OF *DIOGENES CUSTOS*, FABR.

The cardiac and the pyloric chambers and their ossicles resemble those of *Albunea* and *Clibanarius*, except in the structure of the mesocardiac and the urocardiac ossicles and the median tooth. The mesocardiac ossicle is broad in the middle and is indistinctly separated from the pterocardiac ossicle and the urocardiac ossicle. The urocardiac ossicle is in the form of a broad rectangular plate, the posterior end of which bears the median tooth. The median tooth is produced into three posteriorly directed spine-like processes, the central of which being the most calcified and chitinised. The setae from the anterior border of the propyloric ossicle surround the tri-radiate median tooth.

The straining is similar to that of *Clibanarius longitarsus*. The V-shaped masticatory structure carrying the denticles is comparatively broader. The infra-lateral cardiac teeth are more chitinised here than those of *Clibanarius*, and the whole structure is more profusely beset with setae. The musculature and the working of the armature are

similar to those of the *Clibanarius*. The gastric armature of *Diogenes diogenes*, Herbst is similar to that of *D. custos*.

THE GASTRIC ARMATURE OF *PENAEUS INDICUS*, M. EDWARDS.

It shows certain resemblances to that of *Cerataspis monstrosus*, which is the simplest type, and also a few features characteristic of the more advanced types. The cardiac chamber is very much elongated and is considerably broadened in the middle. The mesocardiac ossicle is a triangular piece of sclerite, placed in the roof of the broadest portion of the cardiac chamber. The base of the triangle is situated anteriorly ; the central region and the sides are thickened and calcified.

The urocardiac ossicle is attached anteriorly to the posteriorly directed apex of the triangular, mesocardiac ossicle. It is a rod-like structure narrowed in the middle, and in its posterior end, shows two crescentic chitinisations with an intervening concavity. The posterior end is attached to the median tooth.

The median tooth is also a triangular structure, whose anteriorly directed base is attached to the hind end of the urocardiac ossicle. The apex bears a single big denticle which is followed by nine to eleven smaller denticles. The large apical denticle projects into the cardio-pyloric passage.

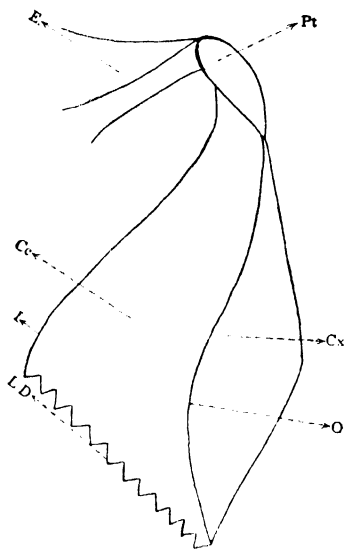
The structure of the cardiac ossicle and the urocardiac ossicle and the median tooth resembles that of *Nephrops*. In the case of *Nephrops* the triangular, median tooth is not differentiated into denticles.

The pterocardiac ossicles are very much reduced and are attached to the base of the mesocardiac ossicle on either side. They are similar to those of *Nephrops* and *Astacus*.

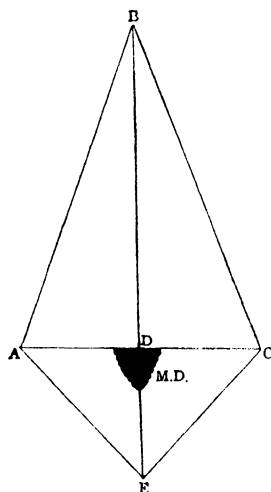
The zygocardiac ossicles are attached to the posterior ends of the pterocardiac ossicles. They are narrow anteriorly, becoming gradually broadened towards the hind end. They do not exhibit any complicated folding. The posterior border bears the lateral teeth on either side of the median tooth. Each lateral tooth is composed of a uniform row of sharp denticles.

The noteworthy feature about the gastric armature of *Penaeus* is a long row of sharp, accessory denticles along the lateral folds of the cardiac chamber, extending from the middle of the zygocardiac ossicle on either side, as far as the anterior extremity of the elongated cardiac chamber. All the denticles are of uniform structure. These longi-

tudinal rows of denticles together with the denticles of the lateral teeth show a striking resemblance to the two longitudinal lateral rows of denticles along the lateral folds of the cardiac chamber of *Cerataspis monstrosus*. These rows of denticles in *Penaeus*, from their relative position, can be termed the "supra-lateral" cardiac teeth.



Text Fig. 17.



Text Fig. 18.

TEXT FIG. 17. The Zymo-cardiac ossicle of *Penaeus indicus*, Milne. Edwards. M. Meso-cardiac ossicle. The rest is as in Text Fig. 2.

TEXT FIG. 18. The schematic representation of the relative arrangement of the supra-lateral cardiac teeth, infra-lateral cardiac teeth and the median tooth. A.B. & B.C. The two rows of supra-lateral cardiac teeth; A.E. & C.E. The two rows of infra-lateral cardiac teeth; D. The point of intersection of the diagonals of the rhombus-like figure formed by the above mentioned two sets of teeth; M.D. Median tooth.

The cardiac supporting ossicles are not differentiated, but their position is indicated by the V-shaped row of sharp and uniform denticles present below and bounding the median tooth. These correspond to the infra-lateral cardiac teeth, carried by the pectinal ossicles of the previous forms. It is interesting to note that the supra-lateral cardiac teeth and the infra-lateral cardiac teeth form a rhombus-like outline. The median tooth is situated almost at the point of intersection of the diagonals. The apex of the triangular median tooth lies along AB while the base lies along CD as indicated in the Text Fig. 18.

The pyloric chamber is differentiated into an anterior spacious division and a posterior division where the ampullary system of ridges is developed. The pyloric ossicles are not well differentiated.

The masticatory mechanism in *Penaeus* seems to be intended for tearing soft food material into smaller pieces rather than for crushing hard food-materials. The examination of the gastric contents of a number of these animals confirms this view. The hard shell-like structures of animals taken in as food, met with in the gastric chambers of almost all the previous forms, were not noticed in this case.

Another very peculiar feature of the masticatory mechanism is the occurrence of certain masticatory structures outside the gastric region. There is a group of six sharp chitinous denticles in the posterior end of the oesophagus. They project down from the dorsal wall and their pointed ends are directed ventrally. These are probably intended for the preliminary reduction of food materials before they are actually sent down for the regular masticatory and straining processes. Such structures are not met with in any other form so far studied.

The straining is effected by the profuse setae present in the ampullary, inter-ampullary and supra-ampullary ridges. The musculature resembles that of *Astacus fluviatus*.

The working of the armature is slightly different from the previous forms. The median tooth does not seem to have a downward movement, but has only a backward and forward movement which is effected by the anterior and the posterior gastric muscles. The lateral teeth seem to work against the median tooth. The working of the zygocardiac ossicles is similar to those of *Paratelphusa*.

The supra-lateral cardiac teeth and the infra-lateral teeth are worked by the lateral cardiac muscles. The oesophageal armature appears to be worked by the posterior oesophageal dilator and depressor muscles.

SUMMARY AND CONCLUSION.

1. The general plan of the gastric armatures is fundamentally the same in the different forms studied.

2. The structural details vary particularly in the case of the following :—

- (a) The urocardiac ossicle and the median tooth.
- (b) The denticles carried by the masticatory sclerites.
- (c) The setae constituting the straining devices.

3. The *modus operandi* of the armature also differs in correlation with the disposition of the propyloric ossicle.

4. The musculature of the armature is slightly varied, depending on the disposition of the propyloric ossicle.

5. In some forms like *Diogenes*, *Clibanarius* and *Albunea* additional masticatory structures are developed by the modification of the pectinal system of ossicles.

6. The working of the pectinal system of ossicles differs, depending on the fact whether they are for mastication or for straining ; if they are for straining, their action alternates with that of the main teeth-bearing ossicles, and if masticatory, it is simultaneous.

7. The gastric armature of *Penaeus indicus* differs from that of the rest in the development of the following structures :—

(a) The œsophageal armature outside the gastric region.

(b) Supra-lateral cardiac teeth along the lateral folds of the cardiac region.

8. The gastric armatures of the forms so far studied present a well graded series of complexities. *Cerataspis monstrosus* described by Bonier, presents a most primitive type. The gastric armature of *Penaeus indicus* is intermediate between this primitive and more advanced types. *Nephrops norvegicus* and *Astacus fluviatus* come next in the series, followed by *Albunea symnista*, and the different species of *Diogenes* and *Clibanarius*, *Paratelphusa*, (*Oziotelphusa*) *hydrodromus*, *Cancer pagurus*, *Neptunus pelagicus* and *N. sanguinolentus*, *Matuta victor* and *Gelasimus annulipes*, in the order of increasing complexity of the gastric armature.

In conclusion I have great pleasure in expressing my best thanks to Mr. H. Channapayya, Zoologist Govt. Museum, Madras for the identification of the species and to Dr. S. G. Manavala Ramanujam, Professor of zoology, Presidency College, Madras, and Mr. R. V. Seshaiya, Lecturer in zoology, Annamalai University, for valuable suggestions and guidance.

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THE EXPLANATION OF PLATES *

Ar ; Ampullary ridges beset with setae.

Co. ch. Cardiac chamber.

C. M. R. Cardiac median ridge.

E. P. Exopyloric ossicle.

Inf. C. Infra-lateral cardiac ossicle.

Inf. L. T. Infra-lateral teeth.

K'. Inner knob-like terminations of the anterior end of the zygo-cardiac ossicle.

K''. Outer knob-like termination of the anterior end of the zygo-cardiac ossicle.

L. C. P. Lateral cardio-pyloric ossicle.

L. T. Lateral teeth.

M. Mesocardiac ossicle.

M. D. Median tooth.

Oe. D. Œsophageal group of denticles.

P. Pyloric ossicle.

Pc. Pectinal ossicle.

P. ch. Pyloric chamber.

Pt. Pterocardiac ossicle.

P. P. Propyloric ossicle.

Pr. Pc. Pre-pectinal ossicle.

Ps. L. The V-shaped masticatory structure.

Ps. Pc. Post-pectinal ossicle.

S. Setae.

S. B. Setose brush.

S. D. Sub-dentary ossicle.

Sup. L. T. Supra-lateral cardiac teeth.

T. P. B. Transverse pyloric chitinous bar-like structure.

U. Urocardiac ossicle.

Z. Zygocardiac ossicle.

* The plates as well as the text figures are semi-diagrammatic.

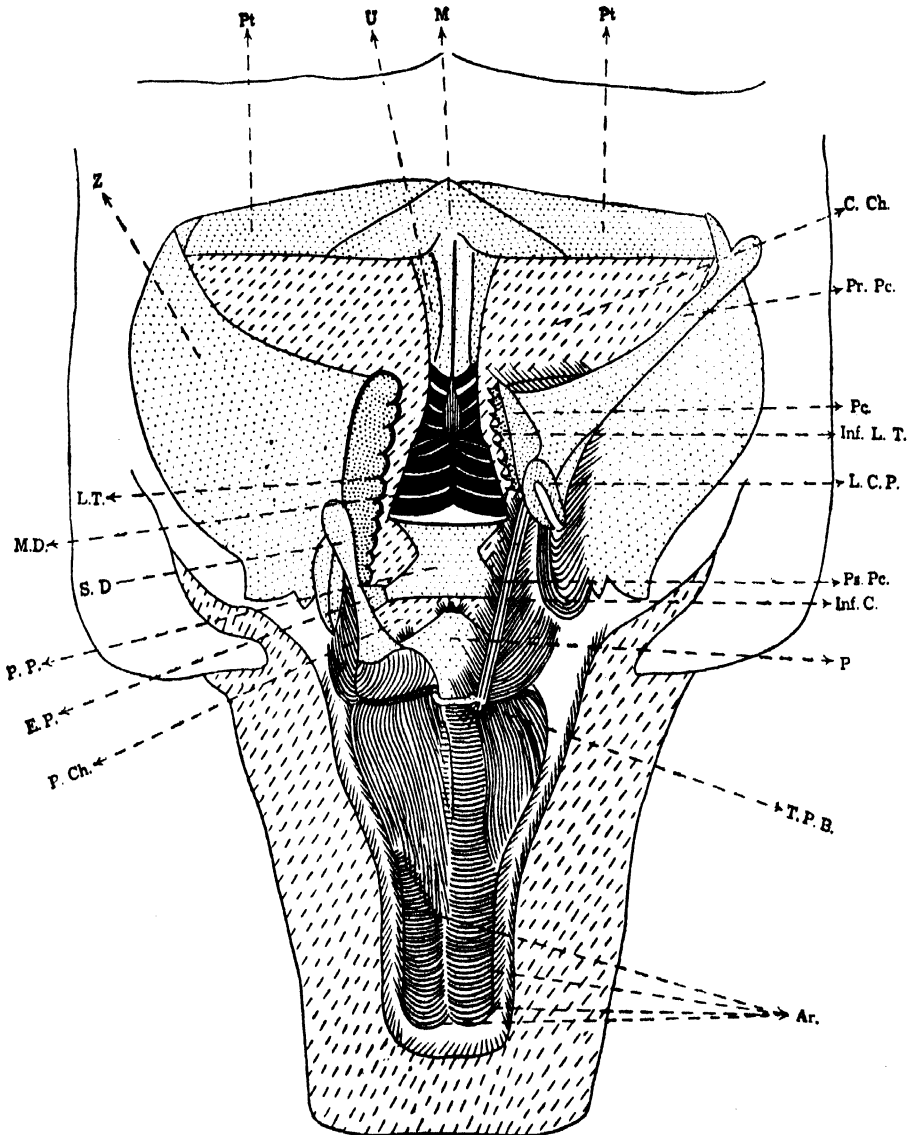


Plate I; The gastric armature of *Gelasimus annulipes*, Latr.

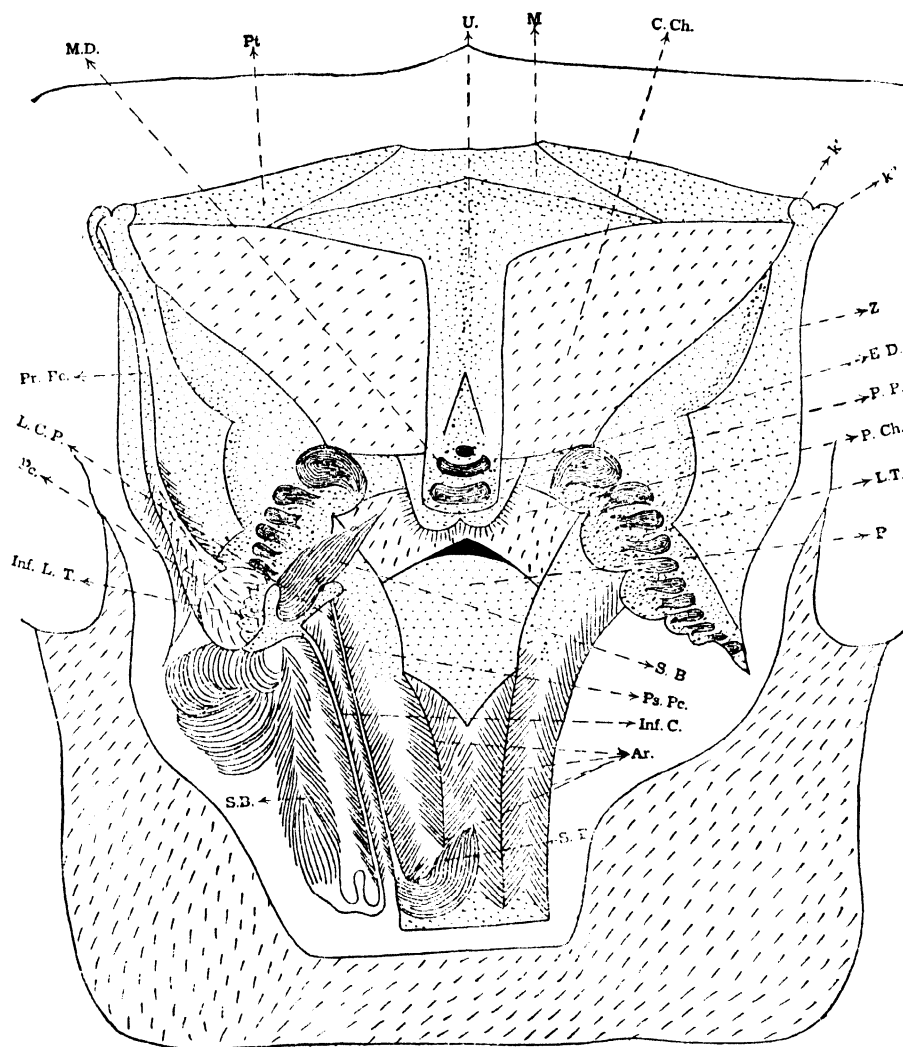


Plate II ; The gastric armature of *Paratelphusa hydrodromus*,
Herb.

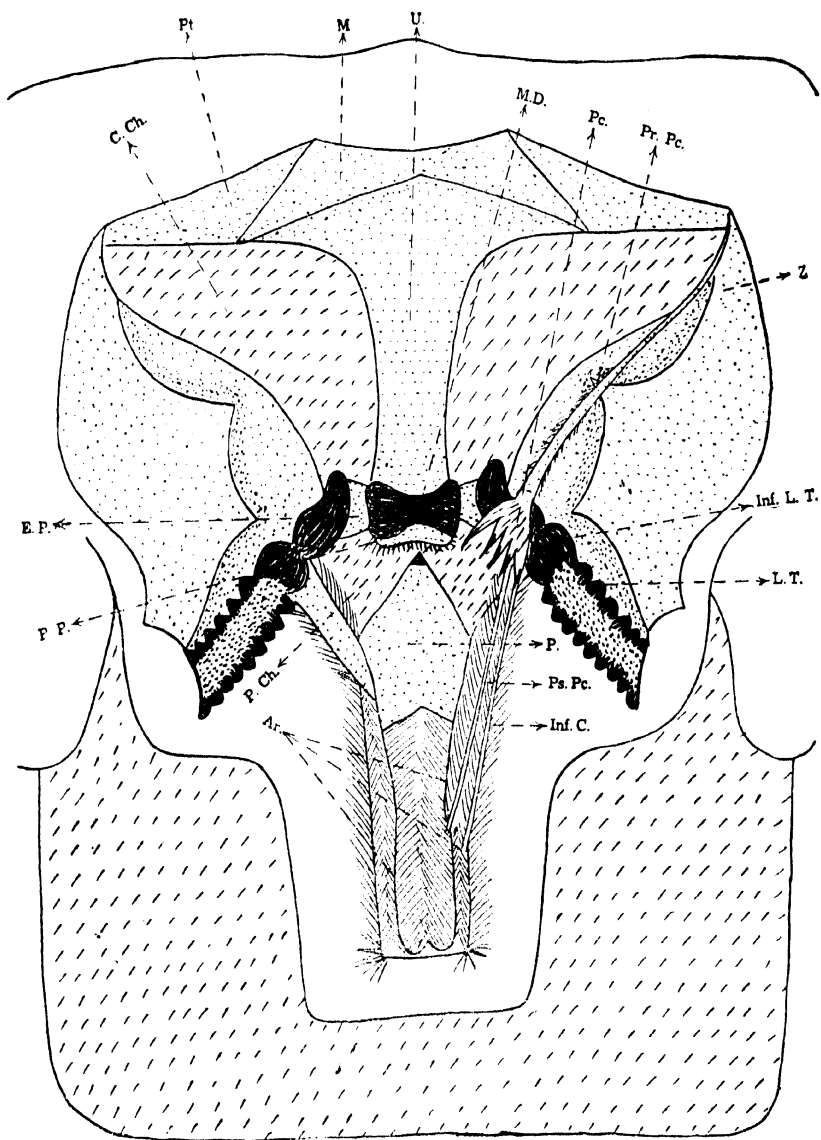


Plate III ; The gastric armature of *Neptunus pelagicus*, (Linn).

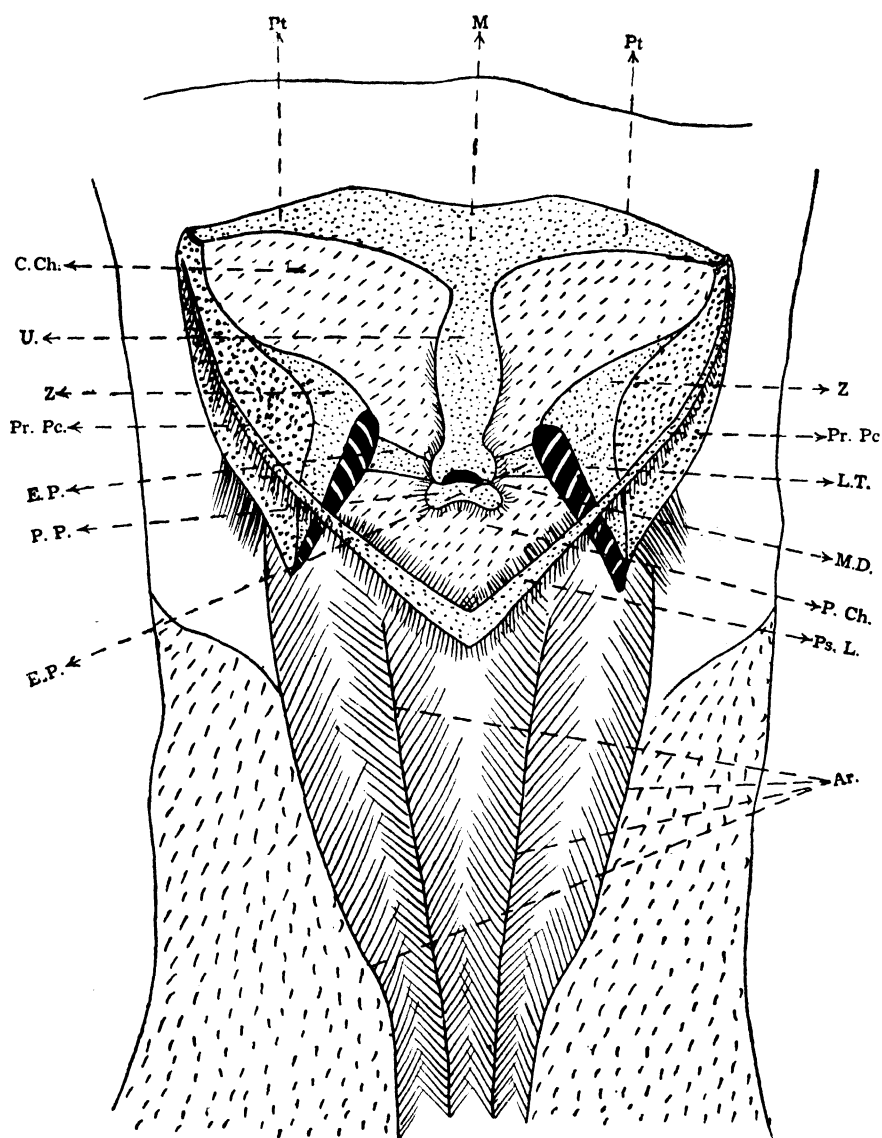


Plate IV ; The gastric armature of *Albunea symnista*, (Linn).

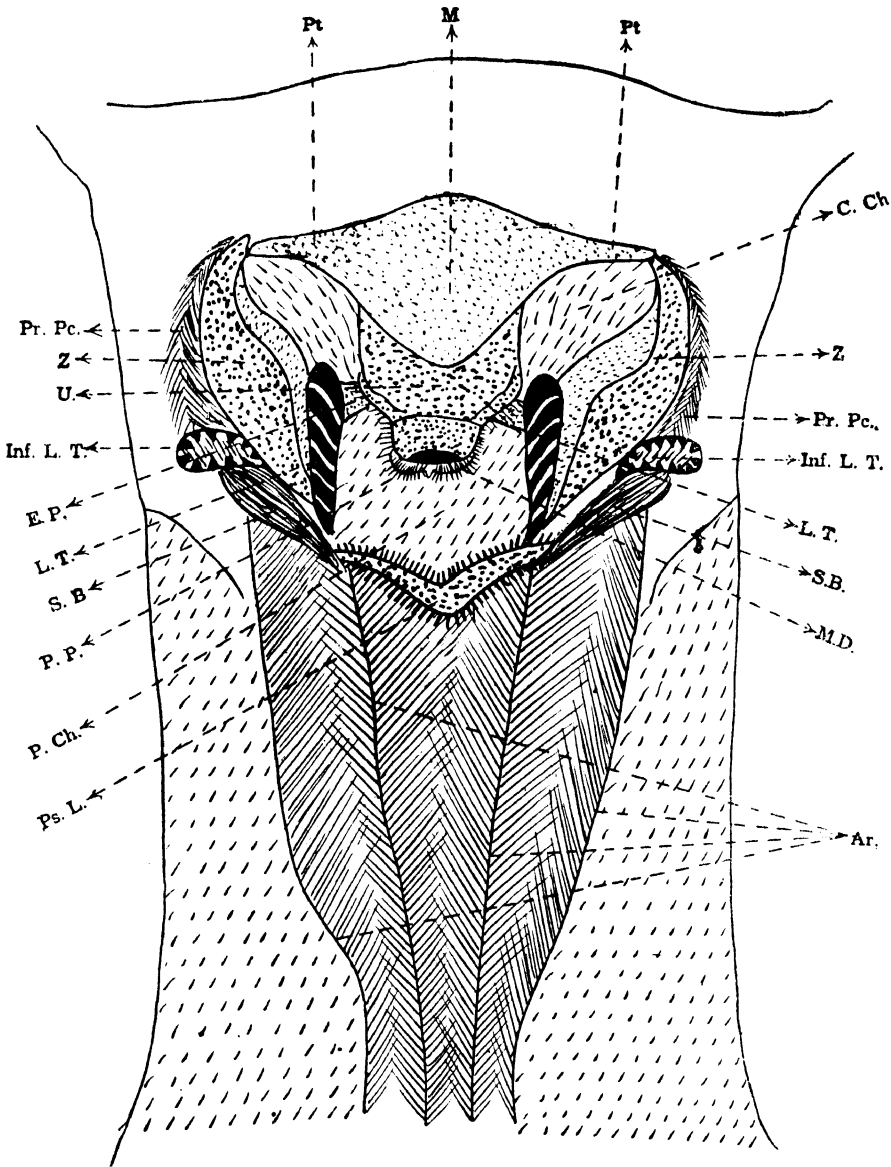


Plate V ; The gastric armature of *Diogenes custos*, Fabr.

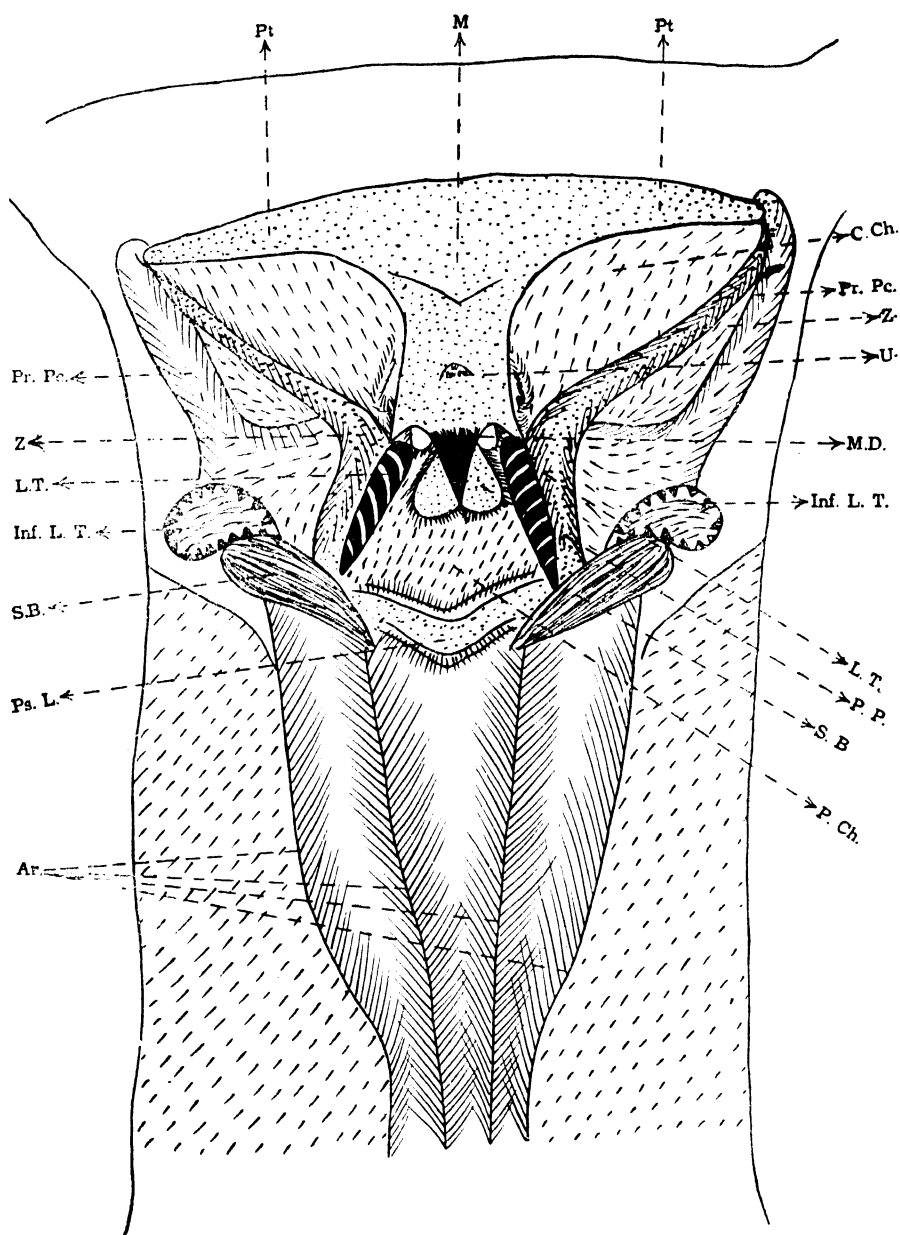


Plate VI ; The gastric armature of *Clibanarius longitarsis*, de Haan.

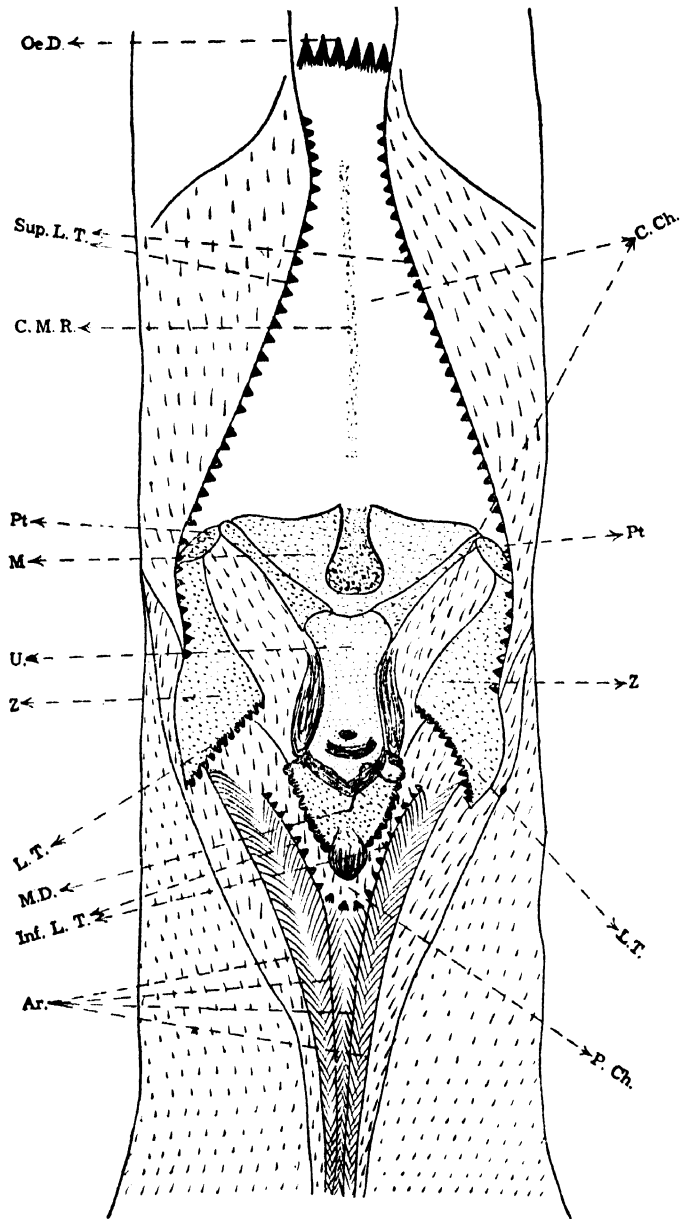


Plate VII; The gastric armature of *Penaeus indicus*, M. Edw.

The Syllogistic Machine

Designed and Constructed

BY

P. S. NAIDU

(Annamalai University.)

INTRODUCTION.

The machine is a contrivance for obtaining automatically the conclusions from the valid moods of the Aristotelian Syllogism. The main feature of the device is that it shows up mechanically the valid moods and their conclusions together with their respective 'mnemonic' names, but presents a blank whenever a fallacious combination of pre-mises is made.

Of the sixty four possible combinations of the eight Major pre-mises, MAP, PAM, MEP, PEM, MIP, PIM, MOP and POM with the eight Minor premises, SAM, SEM, SIM, SOM, MAS, MES, MIS, and MOS, only nineteen are valid. These valid moods have been neatly fitted into the 'mnemonic' lines. These moods with their conclusions may be tabulated as indicated below :

	MAP	MEP	MIP	MOP	PAM	PEM	PIM	POM
SAM	A	E				E		
SEM					E			
SIM	I	O				O		
SOM								
MAS	I	O	I	O	I	O	I	
MES					E			
MIS	I	O				O		
MOS								

Fig. I.

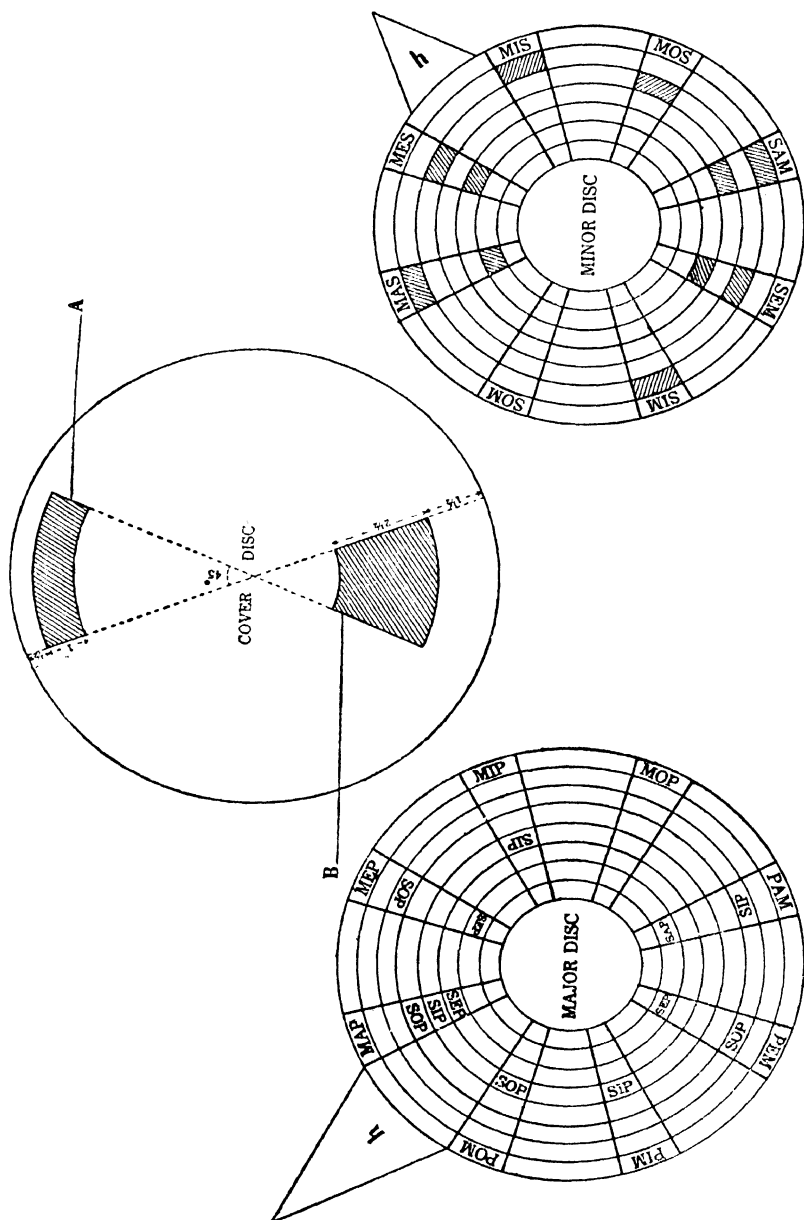
An examination of the table reveals the identical nature of the conclusions obtainable from (1) MEP & PEM, (2) MIP & PIM, (3) SEM & MES, (4) SIM & MIS. Omitting POM & MOS, which are inefficient as premises, the table may be abridged as shown in Fig. II.

	MAP	MEP or PEM	MIP or PIM	MOP	PAM
SAM	A	E			
SEM or MES					E
SIM or MIS	I	O			
SOM					O
MAS	I	O	I	O	I

Fig. II.

THE ORIGINAL DESIGN.

The compactness of the table and the syllogistic symmetry (vide app. I.) observable therein suggested the possibility of constructing a 'thinking machine.' The problem, as it presented itself in the earliest stages, was to design a suitable mechanical arrangement which would, when the valid premises came together, reveal their respective conclusions, but merely show up blank space in the case of invalid combinations. The following is a description of the first design. Three circular discs, known as the 'Major,' the 'Minor,' and the 'Cover Discs,' of radii $4\frac{1}{2}$ ", 4", and 5" respectively, are cut out of thin white card board. Nine concentric circles are drawn on the 'Major' and eight on the 'Minor,' their radii decreasing uniformly by $\frac{1}{2}$ ". Each disc is then divided into twenty-four equal sectors. The Major premises and the conclusions are written on the 'Major' disc as shown in Fig. iii.



Shaded slots to be cut out.
h—handles (Major handle should be longer than the minor).
Fig. III.

The minor premises are written round the edge of the 'Minor' disc, and eleven slots are cut out at the places indicated in the figure. Two 'Windows' are cut out of the 'Cover' disc. The three discs are then placed one over the other, the 'Cover' at the top, the 'Major' at the bottom and the 'Minor' in between them, with a strong knitting needle passing through their common centre and serving as an axis for rotation. The 'Cover' disc is kept fixed, and the 'Major' and 'Minor' are rotated. As often as a valid combination is obtained at the window A its conclusion is seen through B. In the case of all invalid combinations nothing is seen through B. It should be noted here that the sub-altern moods of the weakened syllogisms appear along with their normal forms.

THE IMPROVED DESIGN

When this simple device worked successfully giving complete satisfaction to the designer, it was considered desirable to introduce into the discs the names of the valid moods as well as those of the fallacies committed by the invalid combinations of premises. The sixty four combinations, the conclusions, and the names of the valid moods, and of fallacies in the case of invalid ones, are set forth in Fig. iv.

Fig. IV.

	* MAP	* MEP	* MIP	* MOP	* PAM	* PEM	* PIM	* POM
SAM	I SAP BARBARA	I SEP CELARENT	UN : MD	UN : MD	UN : MD	II SEP CESARE	UN : MD	IL : MJ
SEM	IL : MJ	2-VE	IL : MJ	2-VE	II SEP CAMESTRES	2-VE	IL : MJ	2-VE
SIM	I SIP DARII	I SOP FERIO	2 : PART	2 : PART	UN : MD	II SOP FESTINO	2 : PART	2 : PART
SOM	IL : MJ	2-VE	2 : PART	2-VE	II SOP BAROCO	2-VE	2 : PART	2-VE
MAS	III SIP DARAPTI	III SOP FELAPTON	III SIP DISAMIS	III SOP BOCARDIO	IV SIP BRAMANTIP	IV SOP FESAPO	IV SIP DIMARIS	IL : MJ
MES	IL : MJ	2-VE	IL : MJ	2-VE	IV SEP CAMENES	2-VE	IL : MJ	2-VE
MIS	III SIP DATISI	III SOP FERISON	2 : PART	2 : PART	UN : MD	IV SOP FRESISON	UN : MD	IL : MJ
MOS	IL : MJ	2-VE	2 : PART	2-VE	UN : MD	2-VE	2 : PART	2-VE

(The Roman numerals indicate the syllogistic figures. The conclusions and the names of the corresponding moods are given underneath the figures. The fallacies are printed in italics.
 UN : MD stands for Undistributed Middle. 2-VE stands for Double Negative Premises.
 IL : MJ " " Illicit Major. 2 : PART " " Two Particular Premises.)

The problem of fitting these into the original discs was solved by increasing the number of circles to 17 in each case. The appearance of the machine in its final form is somewhat similar to that of a Radio Receiver. (Fig. V.) The two dials (the 'Major' and the 'Minor') are mounted on horizontal spindles and can be rotated independently of each other by the knobs X and Y. The front panel contains two openings and electric bulbs are mounted on the back panel to illuminate the dials from behind. The arrangement of the premises, the conclusions, etc., is shown in detail in Figs. VI and VII.

CHARACTERISTICS OF THE MACHINE.

The following features of the machine may be mentioned:—

(1) It is simple in operation.

(2) Along with the universal conclusions their corresponding sub-alterns also appear through the lower opening of the front panel. But it was considered unnecessary to introduce the mutilated mnemonic words for them.

(3) With regard to the fallacies, it was necessary to select one from each group of several possibilities. For example, in the case of the combination MIP—MOS, the group consists of (1) two particulars, (2) undistributed middle and (3) illicit major. Of these (2) has been chosen. In picking out the fallacies reference to the conclusion has been avoided as far as possible. An attempt has also been made to keep to the fundamental rules, but reference to the corollaries is unavoidable in certain cases. When these considerations are borne in mind, the reason for the choice of a particular fallacy in any given case will be evident.

(4) The machine, it is believed, is the first of its kind.

APPENDIX I.

The special rules of the Figures express the qualitative relationships subsisting between their premises and the conclusions. The following numerical relationships may also be deduced from these rules.

The Valid Moods.

FIG I	AAA	EAE	AII	EIO			
FIG II	EAE	AEE	EIO	AOO			
FIG III	AAI	IAI	AII	EAO	OAQ	EIO	
FIG IV	AAI	AEE	IAI	EAO	EIO		

I

The number of times that A, E, I, and O appear as conclusions in each figure.

	A	E	I	O	Total No. of conclusions in each Fig.
Fig I	1	1	1	1	4
Fig II	0	2	0	2	4
Fig III	0	0	3	3	6
Fig IV	0	1	2	2	5
Total	1	4	6	8	19
		(2 x 2)	(2 x 3)	(2 x 4)	

II

The number of possible combinations of any given major or minor with the several minor and major premises.

Major	MAP	MEP	MIP	MOP	PAM	PEM	PIM	POM	Total
No :	4	4	I	1	4	4	1	0	19
Minor	SAM	SEM	SIM	SOM	MAS	MES	MIS	MOS	
No :	3	1	3	1	7	1	3	0	19

III

The number of times that A, E, I and O occur as major or minor.

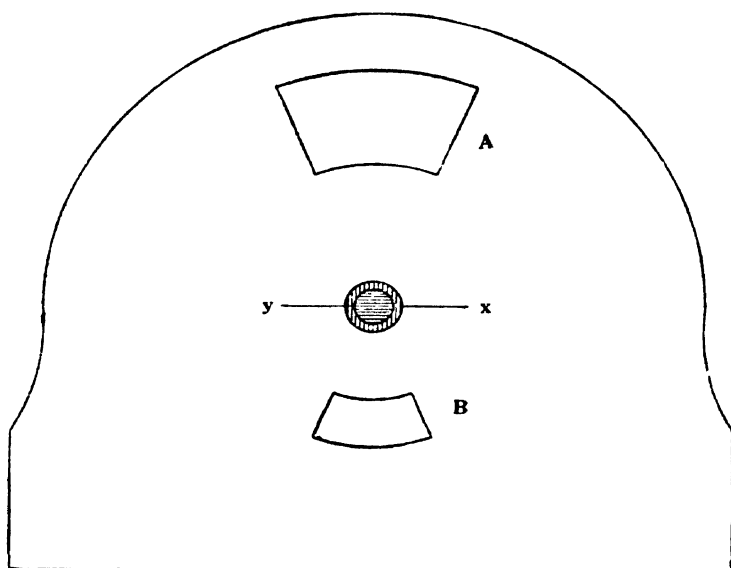
Major

Minor		A	E	I	O	Total
	A	3	4	2	1	10
	E	2	0	0	0	2
	I	2	4	0	0	6
	O	1	0	0	0	1
	Total	8	8	2	1	19

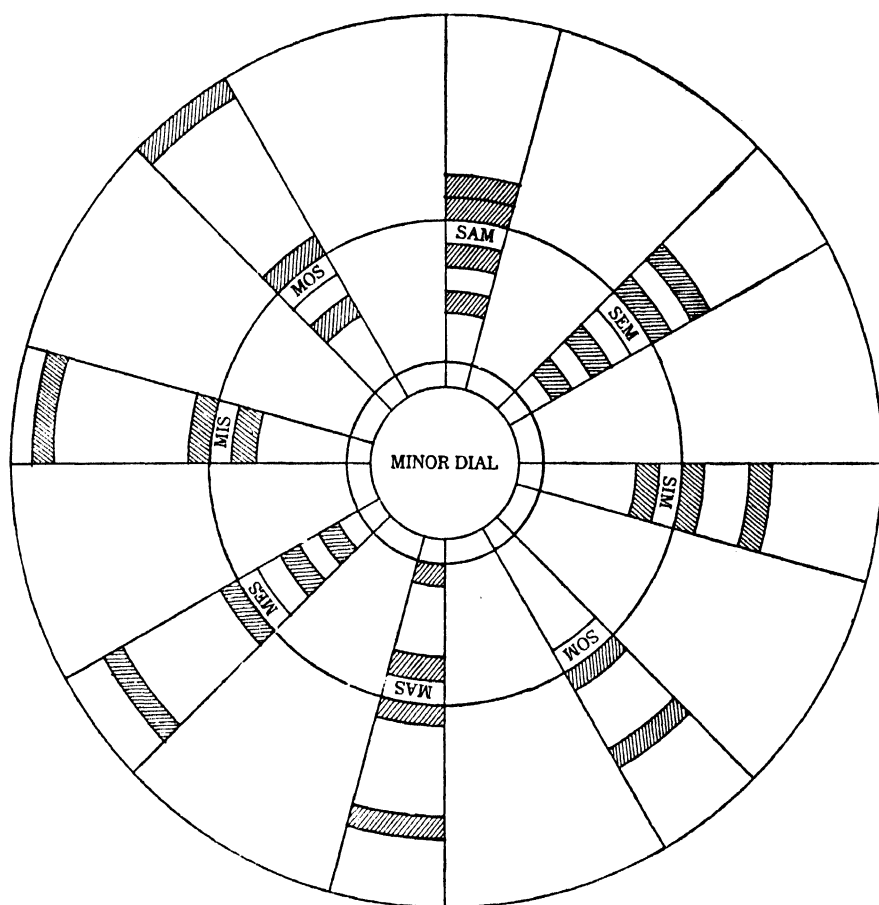
IV

The number of possible combinations of A, E, I and O among themselves taken two at a time.

	AA	AE	EA	AI	IA	AO	OA	EI	Total
	3	3	3	2	2	1	1	4	
Total	3	6		4		2		4	19

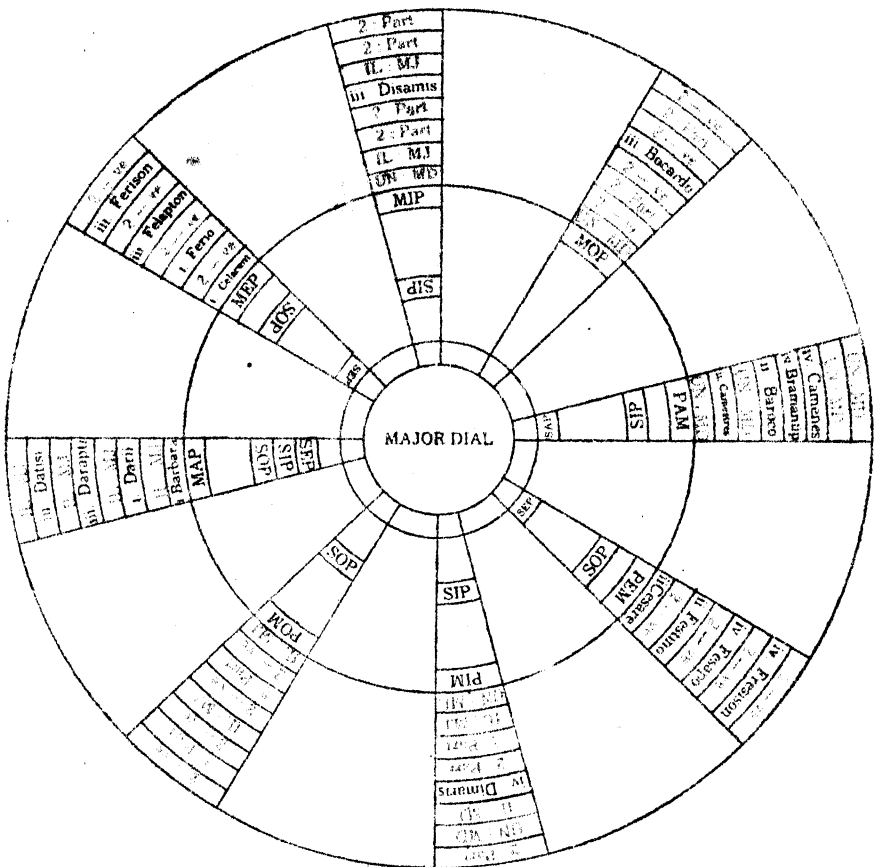


The Syllogistic Machine.
Fig. V.

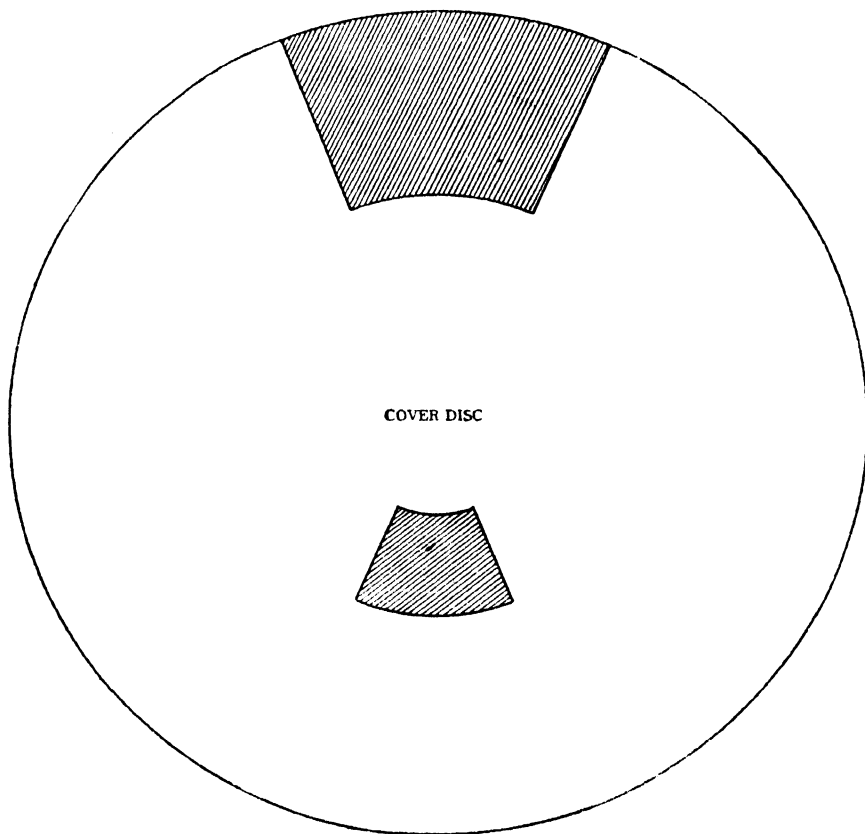


The Minor Dial.
Shaded slots to be cut out.
Fig. VI.

THE SYLLOGISTIC MACHINE



The Major Dial.
The Fallacies are printed in Red.
Fig. VII.



The Cover Disc.
Shaded slots to be cut out.
Fig. VIII.

(N.B.—The dials in figures VI, VII, and VIII may be copied to suitable scale and rotated round their common centre. Bristol Board and Indian Ink are recommended for this purpose.)

Abhiṣeka-Nāṭaka

(An English Translation with Notes.)

Abhiṣeka-Nāṭaka

ACT I.

[Then at the end of Nandi enter Sūtradhāra¹]

Sūtradhāra.

²Who destroyed the enemies of the Sacrifice of the son of Gādhi, who overcame in battle the valour of Virādha, Khara and Dūṣaṇa and who killed the proud and haughty Kabandha and the Lord of *Vānaras*—may He, the Destroyer of the race of the Lord of *Rākṣasas*, protect you. (1)

Thus do I wish to inform you, worthy sires. [*Wandering about and looking*] Ah! what is this sound that I hear when I am about to speak? Ah, I see:

[*In the postscenium.*]

This way, Sugrīva, this way.

Pāripārśvaka. [*Entering*] Friend!

Whence has this loud sound arisen, which pierces the ears and which is similar unto the roaring in the sky of the massive clouds, driven by fierce winds? (2)

1. This has all along been one of the dramas very popular among the Cākhyars, who are the professional actors attached to the more important temples in Kerala. They call this drama *Cerīya-abhiṣeka* to distinguish it from the *Valīya-abhiṣeka*, i.e., the *Āścaryacūḍāmaṇi* of Śaktibhadra. The fourteen acts of these dramas *plus* the seven acts of the *Pratimā-nāṭaka*, locally known as *Vicchinnābhiṣeka*, constitute the twenty-one acts, familiar on our stage in Kerala, depicting the life and career of Śrī Rāma.

2. Note the nature of the *Sthāpana*. This is not exactly like the *Sthāpana* found in the other dramas of the series *wrongly* styled the *Bhāsa-nāṭaka-cakra*. As a matter of fact, it could very well have been cut down. The longer explanation of what the sound was has been given possibly with a view to distinguish it from the other *Rāma-nāṭakas*.

Sūtradhāra. Friend, don't you know ? This announces the preparation to compass the death of the golden wreathed Bāli, the king of all *Vānaras*, made by Rāma and Sugrīva who have signed a compact for mutual help—Rāma, the light of the *Raghu* race and the delight of the world, who bemoans the loss of his wife and Sugrīva, the broad necked lord of *Haris* and *Ṛkṣas*, who has been driven away from his kingdom for making overtures to his wife.³ And indeed the two,

Rāma and Lakṣmaṇa, are now come up to reinstate Sugrīva exiled from his kingdom, like Hari and Hara come to reinstate Indra. (3)

[*Exeunt.*

STHĀPANA.

3. The two great heroes, Rāma and Sugrīva, are alike : both are exiles from their home and in the exile a woman is implicated ; both are grieving over the loss not so much of their kingdom as of their beloved and both again have only a single devoted follower, Lakṣmaṇa and Hanūmān. No wonder they are brothers in distress and they entered into an alliance the moment they came together.

[*Then enter Rāma, Lakṣmaṇa, Sugrīva and Hanūmān.*]

Rāma. Sugrīva, this way, this way.

Now shall I quickly fell down to the ground your enemy killed with my arrows and his body cut up. Cast off, O king, thy fear, (for) thou standst by my side⁴; and see that Bāli killed in battle. (4)

Sugrīva. Lord, through thy grace I may dare covet even the kingdom of Gods; what, then, need be said of the kingdom of *Vānaras*?

I have no doubt that your arrows, when discharged, will at once pierce the heart of Bāli—the arrow which pierced in the forest the seven *śala* trees, similar unto the snow-clad mountain, and which on account of its force entered the earth, reached the abode of the *Nāgas* and after bathing in the ocean, came back to you. (5)

Hanūmān.

By these words which flow out from your mouth, we have, O King, our fears lulled and our sorrows driven away. O, thou best of *Raghus*, for granting success for Hari, approach the mountain which looks like the water-laden clouds. (6)

Lakṣmaṇa. Sire, from the thick foliage, there by the forest must be Kiṣkinda.

Sugrīva. Well has the prince observed:

Well-protected by thy hand, O King, we have now reached Kiṣkinda which is protected by the arms of the Lord of *Vānaras*. Stop, O thou best of men, and I shall with my roar make the world with its moving mountains unconscious. (7)

Rāma. So be it. Go.

Sugrīva. As my lord orders. [*Wandering about*] Ho!

Sugrīva, whom you, O Lord, exiled without reference to his guilt, now wishes to serve thy feet in the field of battle.⁵ (8)

4. It is a happy suggestion of the Editor to change the *-api-* into *-asi-*.

5. Here we may not see any euphemism at all. Sugrīva is evidently more sorry than angry: vide verse 22, note 18.

[*In the postscenium.*]

What ! What ! Sugrīva, is it ?

[*Then enter Bāli with Tāra holding on to his garment*]

Bāli. What, what, Sugrīva, is it ?

O, perfect-limbed Tāre, leave off my clothing ? With thy drooping eyes and face, what art thou after ? See now that Sugrīva killed in battle with his whole body weltering in blood⁶. (9)

Tāra. Be pleased, be pleased, Your Majesty, Sugrīva would never come with small help. So take counsel with the ministers and then go.

Bāli. Ha !

O, thou who art fair as the moon, let his refuge be Śakra, or the sharp axe-weaponed Śiva, or Viṣṇu whose eyes are like the full-blown lotus-petal ; none dare come face to face with me and fight. (10)

Tāra. Be pleased, be pleased, Your Majesty. First Your Majesty deserves to bless this woman.

Bāli. Listen to my exploits :

Tāre, in the days of old when the ocean was being churned, I went and laughing at the hosts of *Suras*, *Dānavas* and *Dait-yas*, drew out, to the surprise of all, the terrible-bodied Lord of serpents with his eyes glowing. (11)

Tāra. Be pleased, Your Majesty, be pleased !

Bāli. Ah ! Be thou obedient to me.⁷ Get inside.

Tāra. Here goes my unfortunate self. [*Exit*]

Bāli. Good, Tāra has gone in. I shall now go and crush the neck of Sugrīva. [*Quickly approaching*] Stop, Sugrīva, stop !

6. In striking contrast is the attitude of Bāli. He is blind with anger and he is moved only by one idea—vengeance for the insult offered to him. The one desires to serve his feet, while the other desires to see his body weltering in blood !

7. Bāli feels annoyed and hence orders Tāra in.

Let Indra be thy aid, or even Madhusūdana ; but having come within my sight, thou shalt not go back alive. (12)

Here ! Here !

Sugrīva. As Your Majesty orders !

[Both fight a duel.]

Rāma. Here, here is Bāli :

With his lips compressed and cruel eyes blood-shot, with his arms fisted and teeth bitten, the *Vānara* roaring terribly, shines in the duel like flaming fire, as if desirous of consuming everything. (13)

Lakṣmaṇa. See, Sire, *Sugrīva* !

With his eyes, like the petals of lotus, glowing red, with his strong arms adorned with golden bracelets, he is now rushing at the Lord of *Vānaras* to attack his own *Guru*, discarding the path of virtue, because he is a *Vānara*.⁸ (14)

Struck by Bāli, *Sugrīva* is fallen !

Hanūmān. Ah, alas ! [Approaching *Rāma* with consternation]
Hail, Lord ! This is his fate !

Strong is the Lord of *Vānaras*, but weak is my lord.
His condition and your vow—these my sire must remember. (15)

Rāma. *Hanūmān*, enough of your consternation ! Here do I act.
[Sending an arrow] Ah ! Fallen is Bāli.

Lakṣmaṇa. This, this is Bāli !

Desirous of entering the abode of *Death*, the strong and broad armed hero with his body bathed in blood and his blood-shot eyes drooping, he is falling down, bolding dragging his body which has become inanimate being pierced by the arrow. (16)

8. The words of *Lakṣmaṇa* are very interesting. He cannot appreciate the action of *Sugrīva* in fighting against his *Guru*, but he consoles himself that he is only a *Vānara*. *Lakṣmaṇa* and *Sugrīva* form a striking contrast. Even at this supreme moment when *Sugrīva* is fighting for his life, *Lakṣmaṇa* is moved by considerations of *Dharma* and this is an indication of his outlook on life.

Bāli. [Falling into a swoon, reviving, reading the letters of the name on the arrow, addressing Rāma.]

Worthy,⁹ indeed, of you, O brave Rāma, to kill me in battle thus falsely, you who are a hero, who have no doubt in the righteousness of your action, who are ready to remove deceit in the world, and who profess to follow the path of kingly virtue. (17)

Ha, alas !

You who are so graceful, you who are the seat of fame. you have this day sown the seeds of ignominy¹⁰ by striking me falsely. (18)

Ha ! Rāghava ! Dressed in barks of trees and thus hiding the purpose of your heart by your dress, is it not unrighteous of you to kill, from behind cover, me who was fighting with my brother ?

Rāma. How is it unrighteous to kill you from an ambush ?

Bāli. What doubt is there ?

Rāma. It is indeed not so. See :

Depending on cover of traps is the destruction of animals laid down.¹¹ You are deserving of death and are an animal and hence are you punished and from an ambush.¹² (19)

Bāli. You think me deserving of punishment ?

Rāma. What doubt is there ?

Bāli. For what reason ?

Rāma. For appropriating what should not be appropriated.¹³

9. Rāma is not unknown to Bāli, and hence indulges in a biting sarcasm. One born to remove deceit himself resorts to deceit !

10. This is a perfectly true statement. Vide note 17.

11. Rāma justifies his action by saying that he was only following the mode of attack sanctioned by the *Dharma-sāstras*.

12. Here he gives the reason why Bāli deserves to be punished.

13. This is an interesting statement. Bāli. Rāma interprets, appropriates Su-grīva's wife and justifies himself on the score that it was their peculiar *Dharma*. This is wrong and, therefore, he deserves to be punished. Have we here a suggestion that a wrong thing is always a wrong thing and it can never be made right by any rules of convention ? Here Rāma condemns such an attitude. He upholds the

Bāli. For appropriating what should not be appropriated ? That is our *Dharma*.

Rāma. It is proper, is it ?

O king of *Vānaras*, you know what is *Dharma* and what is *Adharma*, and you appropriated your brother's wife, thinking yourself an animal. (20)

Bāli. We are equally faulty in the matter of appropriating brother's wife, and I alone have been punished and not *Sugrīva*.¹⁴

Rāma. You have been punished because you deserve it. Who does not deserve it is not punished.

Bāli.

By *Sugrīva* was appropriated the legitimate wife of mine, his *Guru*'s. By the appropriation of his wife, how do I become punishable, O Descendant of *Raghu*. (21)

Rāma. It is never like yours¹⁵—sometimes appropriating the elder brother's and sometimes the younger brother's wife.

Bāli. We have no answer.¹⁶ Punished by you, I am freed of my sins.

Rāma. So be it.¹⁷

view that a wrong thing is always wrong and it can never be correct by any number of rules. *Dharma* is the same for all and conventions of castes and creeds cannot convert *Adharma* into *Dharma*. This is a point of view that deserves to be well pondered over.

14. Note that if this view is accepted *Sugrīva* also deserves to be punished, for he also appropriated his brother's wife.

15. Note the distinction made between the actions of *Bāli* and *Sugrīva*. This is no doubt a clever distinction, but it sounds more academical than real.

16. *Bāli* cannot advance any further arguments. But evidently he is not satisfied. He consoles himself by saying that because *Rāma* has killed him he would have his sins washed away.

17. This statement appears queer. Is it that *Rāma* himself is not satisfied ? He has only succeeded in silencing *Bāli* in argument. Much discussion has taken place on the subject of *Rāma*'s destruction of *Bāli* and its justification. In the midst of his distress, *Rāma* is advised by *Virādha* to seek the alliance of *Sugrīva* to gain back *Sīta*. So when *Hanūmān* presented himself with his master to *Rāma*, he readily enters into an alliance, as any human being would in those circumstances. The word of honour having been given, *Rāma* could not retract therefrom. This seems to be the position that may be taken in interpreting *Rāma*'s position ; and it is eminently satisfactory from the human point of view.

Sugrīva. Ha ! Fie (upon me)

Alas, O King of *Haris* ! Seeing thy hands, similar unto the trunk of elephants, O elephant-gaited one, with their ornaments gone and lying on the earth, my heart seems to fall.¹⁸ (22)

Bāli. Sugrīva, enough of your sorrows, enough. Such is the course of life.¹⁹

[*In the postscenium*]

Alas, Your Majesty ! Alas !

Bāli. Sugrīva, keep out the women, keep out. In this state I must not be seen.

Sugrīva. As Your Majesty orders. Hanūmān, do so.

Hanūmān. As my prince orders. [*Exit*]

[*Then enter Aṅgada and Hanūmān*]

Hanūmān. Aṅgada, this way, this way.

Aṅgada.

Hearing that the Lord of *Haris* and *Rkṣas* has fallen into the hands of *Death*, here I go broken down and overcome by sorrow. (23)

Hanūmān. There is His Majesty :

Lying on the ground, his heart pierced by arrow, (he) shines like mount *Kraunca* overcome by the *Śakti* of *Guha*. (24)

Aṅgada. [*Approaching*] Ha ! Your Majesty !

The Lord of *Haris* was very strong and happy before ; but now lies on the bare earth with all his activities gone. Dost thou even now desire to go to the hero's heaven, casting aside thy body pierced by noble arrows ? (25)

[*Fall on the ground*]

Bāli. Aṅgada ! Enough, enough of your sorrows. Ha ! Sugrīva !

18. Sugrīva has not forgotten his brotherly feelings. See note 5

19. Bāli realises his mistake only too late.

²⁰Forgetting my faults, casting off your anger and keeping to the path of *Dharma*, receive, O king of *Haris*, him who is the sprout of our race. (26)

Sugrīva. As Your Majesty orders.

Bāli. O, Descendant of Raghu! If these two offend in any way, forgive them their monkey nature.²¹

Rāma. Well.

Bāli. *Sugrīva*, receive the golden wreath, our family treasure.

Sugrīva. Blessed am I. [*Receive*]

Bāli. Hanūmān, bring me water.

Hanūmān. As Your Majesty orders. [*Going out and entering*] Here is water.

Bāli. [*Applying water*] I feel my breath escaping. Here are approaching the sacred rivers, like the Ganges, the celestial *Apsaras*, like *Urvasi*, to welcome me. Here is come to carry me the aerial car for heroes, sent by Yama and borne by a thousand swans. Well, I am coming, I am coming!

[*Go to heaven*]²²

All. Alas, alas, Your Majesty!

Rāma. Ah! *Bāli* has gone to heaven. *Sugrīva*! Offer him the funeral obsequies.

Sugrīva. As my Lord orders.

Rāma. *Lakṣmaṇa*, get ready for *Sugrīva*'s coronation.

Lakṣmaṇa. As my sire desires. [*Exeunt all*]

20. Notice the parting advise of *Bāli*. It is eminently befitting the speaker and the hearer.

21. Who are the two here? We would take it as referring to *Sugrīva* and *Angada*. These are now the leaders and being but *Vānaras*, are liable to go wrong. So he makes a parting request to *Rāma* that they may be condoned when they go against *Dharma*.

22. As in the other dramas of the series which may be correctly styled the *Kerala-nāṭaka-cakra*, here is a fight and a death depicted, which is against the accepted canon of Indian dramaturgy. It must have been accepted as such as a result of the limitations of the ancient Hindu theatre. As a matter of fact the foremost difficulty is the removal of the dead body from the stage, particularly in view of the absence of the front curtain. In the present case this difficulty is got over by the description that *Bāli* goes to heaven. But this only replaces one difficulty by another. How is the flight to be represented? Possibly there might have existed a method of raising up a chariot in air by some mechanical contrivance.

ACT II.

[Then enter Kakubha]

Kakubha. The object having been more than half realised,¹ all the *Vānara* leaders are now after their food. Hence I too shall try to get some food. [Do so]

*Balimukha.*² [Entering] I have been sent by King Sugrīva : ‘ Out of gratitude for the help rendered by Rāma, the *Vānaras* have been sent in all directions in search of Sita ; and they have all returned. Learn the doings of Aṅgada who was sent south and return quickly ! ’ Where now can the prince be ? [Wandering about and looking in front] Here comes the worthy Kakubha. I’ll ask him. [Approaching] Hope you are doing well.

Kakubha. Ah ! Balimukha, whence art thou ?

Balimukha. Ordered by His Majesty I am come in search of prince Aṅgada.

Kakubha. The worthy Rāma and His Majesty are doing well ?

Balimukha. Yes.

Kakubha. What is His Majesty’s wish ?

Balimukha. I have been sent : [Repeat as before].

Kakubha. Don’t you know that the object has been more than half realised ?

Balimukha. What, what ?

Kakubha. Listen :

Knowing the whereabouts of Sita from the king of birds, the son of Vāyu got upon the majestic mountain Mahendra and jumped across the ocean today, thanks to his great strength, for quickly reaching Lanka. (1)

So come along. We shall go to the presence of the prince himself.

[Exeunt]

*Viṣkambhaka.*³

1. The purpose has been more than half realised because the whereabouts of Sita were known.

2. He is the messenger sent by Sugrīva to know the progress of the search.

3. The *Viṣkambhaka* tells us the progress of the story after the death of Bāli and ending with the crossing of Hanūmān to Lanka.

[Then enter Sita surrounded by Rākṣasa women]

Sita. Ah ! Fie upon me. My unfortunate self has become very brave ; for in spite of the fact that I have been separated from my Lord, that I have been led to the court of Rāvaṇa, King of Rākṣasas, and that I have been forced to listen to all unpleasant and undeserving words, suited to his thoughts, I continue to live ! Or putting my faith in my lord's arrows, I shall manage to continue to live. Whence, however, can this calmness of mind have arisen now, like that produced in the artisan's hearth by the sprinkling of water. Can indeed my lord be happy at heart in my absence ?

[Then enter Hanūmān with the ring in the hand]⁴

Hanūmān. [Entering Lanka] Ah ! The wonderful disposition of Rāvaṇa's palace !

With its mansion turrets wrought in gold, with its parks adorned with coral trees, Lanka with its cluster of aerial cars shines like the aerial city of Mahendra ! (2)

Ah, indeed !

Having attained to this unrivalled regal sovereignty, he is now bent upon ruining it by proceeding upon the path of vice.

[Going on all sides] (3)

I have more or less wandered about the whole of Lanka : I have peeped into the interior of the inner apartments, into the halls and aerial cars, into the bath-rooms, into the palaces and mansions of Rāvaṇa, into the drinking halls and private chambers and that many a time ; everywhere I have searched, but I do not find my king's wife. (4)

Alas ! fruitless has been my work. Well, I shall go up the top of this mansion and look around. [Doing so] Here is the *Pramadavana* ! I shall get in and search. [Entering and looking round] Ah, the wealth of *Pramadavana* ! Here indeed :

Is the place wondrously adorned with numerous big trees wrought in gold and set with blue gems and beautiful with

4. The description following gives an idea of the material prosperity of Lanka.

spotless hillocks—the whole looking like the garden of Indra in heaven. (5)

Further :

I have seen the mountains with their wonderful rivulets and golden mineral ores ; I have seen the lakes graced by numerous water animals ; I have seen the gardens adorned with trees always laden with flowers and fruits. I have seen everything in the abode of Rāvaṇa ; but I have not seen Sita. (6)

Who can this dazzling being be in this place ? I shall now see : [*Doing so*] Who can this be :

the slender waisted (lady) surrounded by hideous looking Rākṣasa women, like lightning flash in the midst of dark blue clouds ?

And she is :

Wearing a single braid of hair like a long dark serpent, she is slender-waisted and is thinking of her lord ; she is emaciated owing to fasting ; her face is stained with tears ; and she is like a lotus-cluster scorched by heat. (8)

Ah ! What can this light be ? [*Looking*] Ah, it is Rāvaṇa !

His head adorned with a coronet set with jewels, his beautiful eyes flushed red, walking gloriously proud and disporting like a rutted elephant, the lord of Rākṣasas shines in the midst of young women like a lion diverting in the midst of lionesses.

What shall I now do ? Well, I see. I shall get upon the *Āśoka* tree and hide myself among the branches and know the state of affairs. [*Do so*].

[*Then enter Rāvaṇa and his suite*]⁵

Rāvaṇa.

I am Rāvaṇa who has by his divine missiles put to flight the hosts of the armies of *Suras*, *Dāityas* and *Dānavas* and who has his breast scrapped by the tusks of the angry celestial ele-

5. Note the lustful Rāvaṇa is given a sensuous setting.

phant and by the Vajra ; yet the fair, but indiscreet, Sīta does not like me, but dotes only on that insignificant ascetic of a *Kṣatriya*. Ah ! What impediments do Gods create ! (10)

[*Looking up*] Here, here is the moon !

There rises and grows in the sky the great lover of lilies, the Moon, shining like a mirror made of silver and crushing my heart with his myriad rays. (11)

[*Wandering about*] Here is Sīta at the foot of the tree wrapt in meditation, emaciated for want of food, well hiding her breasts and her belly, as if desirous of entering into herself, shining in the midst of *Rākṣasa* women like a crescent⁶ in a cloudy day, who indeed :

Discarding enjoyments and me and all this prosperity has her heart fixed on that man and is un-yielding. (12)

Hanūmān. Well do I know :

This is that princess, the wedded wife of Rāma, the daughter of (the king of) Mithila, suffering like the terrified deer at the sight of the lion. (13)

Rāvaṇa. [*Approaching*].

Sīte, abandon thy stern vow and come to me, fair maid, discarding now, O, auspicious woman, that man who is dead and who is withdrawn from the path of love. (14)

Sīta. Contemptible is that puny Rāvaṇa ; he does not understand the force my words⁷ have.

Hanūmān. [*Angrily*]⁸ Ah, the insolence of Rāvaṇa !

Ignorant of those two arms, of that big bow, and of that arrow of Rāma, he speaks thus, a dead man ! (15)

I cannot control my anger. Well, I'll myself finish off Rāma's work. Or :

6. The comparison of Sīta to a crescent is very telling.

7. The editor interprets the text as meaning that Rāvaṇa did not understand the power that Sīta has of defending herself by mere words. See note 10.

8. The insolence of Rāvaṇa makes even Hanūmān angry. Notice the wise conclusion that Hanūmān arrives at.

If I kill Rāvaṇa, the object is accomplished ; but if the Rākṣasa kills me, a great mission is spoilt. (16)

Rāvaṇa.

O, beautiful-limbed, slender-bodied, and lovely-eyed lady, throw back that dark braid of hair and think of me, O Queen, me who have ten heads and who am adorned with a variety of gems and jewels. (17)

Sīta. Hem, the opposite of virtue flourishes now, since this wicked Rākṣasa continues to live.

Rāvaṇa. O, Queen !

Sīta. Thou art cursed.⁹

Rāvaṇa. Ha, ha, ha ! The power of the *Pativrata* !

I have routed in battle the *Devas* headed by Indra and the *Dānavas* and yet by these three letters of Sīta have I now been made to swoon.¹⁰ (18)

[*In the Postscenium*]

Hail, Lord ! Victory to the Lord of Lanka ! Hail, Your Majesty ! Hail, great King ! The ten *Nāḍikas* are over. It is time for bath ! This way, Your Majesty, this way !¹¹

[*Exit Rāvaṇa with his suite*]

Hanūmān. Rāvaṇa has gone back and sleeping are the Rākṣasa women. This is the time to approach the Queen. [*Getting down from the hollow of the tree*] May you live long unwidowed !

I have been sent by Rāma, the King of men, who knows himself and who has his heart enfeebled through love and sorrow for you.¹² (19)

Sīta. Who can this be ? Can it be the wicked demon come to deceive me in the guise of a monkey pretending to be my lord's friend ? Well, I shall be silent.

9. Rāvaṇa forces Sīta to curse him.

10. See note 7.

11. From this reference it is clear that the scene takes place in the early part of the night. Here is a reference to a bath after 10 P.M.

12. The mode of announcing himself is exceedingly happy.

Hanūmān. The worthy lady does not respond. Enough of your doubts. Listen, madam !

I am the monkey, named Hanūmān, sent in search of thee by the monkey chief who has allied himself with the light of the Ikṣvāku race.¹³ (20)

Sīta [*To herself*] Let him be anybody. Because he has mentioned the name of my lord, I shall talk to him. [*Aloud*] Sir, what news of my lord ?¹⁴

Hanūmān. Listen, Madam :

Pale and emaciated owing to long fasting, deprived of the strength of mind, burned by the arrows of the god of love, his eyes filled with tears, he keeps on his wasted body, delighting only in the thoughts of thy noble goodness and loveliness. (21)

Sīta. [*To herself*] Ah, fie upon my unfortunate self : I am ashamed to hear that my lord is suffering thus. Even the love-lorn condition of my lord is fruitful so far as I am concerned, if indeed the monkey speaks true. Listening to my lord's love and toils on my behalf, my heart swings between happiness and misery. [*Aloud*] Sir, how did you come into contact with my lord ?

Hanūmān. Listen, Madam :

For thy sake, madam,¹⁵ he killed in battle Bāli, the king of *Vānaras*, and made the kingdom of *Haris* over to Sugriva, O Princess. And by the king were sent monkeys in all directions in search of thee ; one of whom am I come to thee, thanks to the words of the vulture.¹⁶ (22)

And further, it is thus.¹⁷

Sīta. Cruel, indeed, are the Gods who make my lord suffer thus.

13. Compare this statement with the preceding. He said that he was sent by Rāma and now announces who he was and why he came.

14. Notice the reason why Sīta in spite of her doubts proposes to talk to him. He mentioned her lord's name with respect and reverence.

15. Here Hanūmān makes clear why Rāma killed Bāli. It is for the sake of Sīta, for getting a powerful ally to rescue Sīta from the hands of Rāvaṇa.

16. The reference to the vulture induces greater faith in Sīta.

17. In these words Hanūmān conveys probably the message of Rāma and the symbol of faith. In any case a stage direction should have made this point clear.

Hanūmān. Madam, enough of your sorrows. Rāma indeed :

Carrying the great bow and surrounded by the *Vānara* army, (Rāma) will proceed to Lanka to punish the ten-headed. (23)

Sīta. Can it be a dream I have seen ? Sir, is it true ? I do not know !¹⁸

Hanūmān. [*To himself*] Ha, alas !

The loving lady knows well her lord ; yet weighed down by sorrow, she does not believe in him, as if she was in another body.¹⁹ (24)

[*Aloud*] Madam, I shall now indeed :

O, princess, bring to you here your lord with his excellent bow strung and arrows in his hand. Cast off all thy doubts about me and think yourself by the side of your lord, freed of all thy sorrows. (25)

Sīta. Sir, so inform my lord of my condition that he will not be overcome by sorrow.²⁰

Hanūmān. As my worthy madam orders.

Sīta. Go. May thou succeed in thy efforts.

Hanūmān. Blessed am I. [*Wandering about*] How now shall I inform Rāvaṇa of my coming ? Well, I shall do so.

Crushing with my hands and foot the *Tṛkūṭa* garden, the abode of hosts of bees, beautiful on account of lotus and graced with lovely clusters of trees, I shall deprive the Lord of *Rākṣasas* of his pride of material prosperity. (26)

[*Exit*]

ACT II.

18. So great has been her misery and so great is the hope now held out that she naturally is reluctant to believe Hanūmān.

19. Hanūmān realises the situation and so to reassure her promises to bring Rāma there.

20. This is one of the happiest speeches in the whole drama. A more appropriate conclusion for this momentous scene could not be conceived.

Jagannātha Paṇḍita

By

V. A. RAMASWAMI SASTRI

(Annamalai University)

(Continued from Page 244, Vol. III, No. 2.)

(3) AS A LITERARY CRITIC

Most critics of the Dhvani and Post-Dhvani periods have in detail dwelt upon the classification of Dhvani, without which the full elucidation of the *dhvani doctrine* in literature is not complete. Like Ānandavardhana and Abhinavagupta in the Dhvani period and Maṇṭabhaṭṭa, Vidyānātha, Vidyādhara and Viśvanātha in the Post-Dhvani period, Jagannātha Paṇḍita, the last of the great exponents of *Dhvani* in the Post-Dhvani period has given in his *Rasagaṅgādhara* a brief yet up-to-date classification of Dhvani with suitable illustrations.

Classification of Dhvani on the basis of suggested sense.

It is admitted on all hands that the most important variety of Dhvani is the *Rasadhvani* without which no *kāvya* is a source of pleasure. It is in this sense that the *Rasadhvani* is called the *viśrāntidhāman*—the chief contributor of pleasure in the form of complete cessation from all activities. The other two well-known varieties of Dhvani—*Vastudhvani* and *Alaṅkāradhvani*—do not stand on a par with the *Rasadhvani* in that they are not by themselves *viśrāntidhāmans* but they are described as *anyaśābdavailakṣaṇyakārins* (i.e.) they are different from the *Vāc्यārtha* (primary sense) and the *lakṣyārtha* (secondary sense) and lead, as suggested sense, to a *pāryantikarasadhvani*—culmination of a *Rasadhvani*. This three-fold classification of Dhvani is based on the nature of the suggested sense—*Rasa* (or *Bhāva*), *Vastu* and *Alaṅkāra*. Here it is to be observed that the term *Vastu* in the phrase *Vastudhvani* is so comprehensive as to include within its scope even *Rasa* and *Alaṅkāra* ; but it is generally taken to mean any *Vastu* (idea) other than *Rasa* and *Alaṅkāra*. In the phrase *Alaṅkāradhvani* there is a *paradox*—an *Alaṅkāra* as an *Alaṅkāra* cannot be a Dhvani and *vice versa*—which is generally answered by the application of the *brāhmaṇaśramaṇanyāya* ; that is, just as a *brāhmaṇa* cannot be a *śramaṇa* but he, once being a *brāhmaṇa*, is converted into a *śramaṇa*, so the *Alaṅkāra*, once an *Alaṅkāra*, is now called a *Dhvani*.

Classification of Dhvani on the basis of vyañjaka (suggestor).

Another well-known classification of Dhvani is based on the *vyañjakas*—*śabda* and *artha*, the former expressing the latter by the two potencies, *abhidhā* and *lakṣaṇā*. The two main varieties of Dhvani (on the basis of the *abhidheyārtha*) which is popularly known as *vivakṣitānyaparavācyadhvani*, are the *asamlakṣyakramadhvani* and the *samlakṣyakramadhvani*. The first of these two possesses many varieties—*Rasadhvani*, *Bhāvadhvani*, *Rasābhāsadhvani*, *Bhāvābhāsadhvani*, *Bhāvaśāntidhvani*, *Bhāvodayadhvani*, *Bhāvasandhidhvani*, *Bhāvaśabalatādhvani*, etc., where the chief point of interest lies in the fact that it is *akrama*—devoid of any perceptible sequence of time (between the cognitions of the *abhidheyārtha* (the suggestor) and *vyañgyārtha* (the suggested). In the instance of *Rasadhvani* the *vācyārtha* would immediately lead one to the realisation of *Rasa* : i.e. when the *vibhāvas* and *anubhāvas* of the *Rasa* in question are beautifully described by the poet and when the chief *vyabhicāribhāvas* are successfully suggested by their own *vibhāvas* and *anubhāvas*, the suggestion of *Rasa* takes place *all at once* and this leads a true *Sahṛdaya* to the enjoyment of what is called *Aesthetic pleasure*. Jagannātha has first explained elaborately the *dhvanis* of all the nine *Rasas* in suitable illustrations pointing out their *vibhāvas*, *anubhāvas* and *vyabhicāribhāvas*. In the elucidation of *Bhāvadhvani* he gives *thirty-four* *bhāvas* which he defines and illustrates in detail. He observes that the difference between the *Rasadhvani* and the *Bhāvadhvani* is that in the former the conditions for the suggestion of *Rasa* are very effective, while in the latter they are primarily contributing to the suggestion of a *Bhāva*, though the suggestion of *Bhāva* would ultimately culminate in the suggestion or realisation of *Rasa*. In such complex instances, Jagannātha says, the context would help us to a considerable extent to decide on its nature.

Bhāvaśāntidhvani, etc., as the Varieties of the Bhāvadhvani.

Jagannātha is of opinion that the varieties of Dhvani—*Bhāvaśānti*, *Bhāvodaya*, *Bhāvasandhi* and *Bhāvaśabalatā*—are varieties or representations of *Bhāvadhvani*, since in such cases *bhāva* is to be given the chief place in the body of suggestion, though its particular stages, *śānti*, etc., are the chief sources of pleasure. If the *śānti* of the *bhāvas* is given prominence in the suggestion, then Jagannātha contends, in the instance,

‘क्षमापणैकपदयोः पदयोः पतति प्रिये ।
शेमुः सरोजनयना नयनारुणकान्तयः ॥’

(*Rasagaṅgādhara*, p. 105.)

the *śama* is expressed by the verb *śemuḥ*; but only the *bhāva*—*roṣa* (anger)—is suggested by the phrase '*nayanāruṇakāntayaḥ*'; and it would not have, therefore, been called a *bhāvaśāntidhvani*.

The three main conditions of Asaṁlakṣyakramadhvani.

These dhvanis are called *asaṁlakṣyakramadhvanis* under three conditions: (1) a clear context, (2) the easy understanding of vibhāvas, anubhāvas and vyabhicāribhāvas described by the poet and (3) the cultured *Sahṛdaya*, who no sooner has understood the *vācārtha* than he is led to the realisation of *Rasa*, *Bhāva* or any other thing.

Bhāvadhvani sometimes *Samlakṣyakramadhvani* (a *Vastudhvani*) only.

Jagannātha, a close follower of Ānandavardhana and Abhinavagupta, says that if the context is not clear but is to be known after careful consideration of many facts, the suggestion of the *bhāva* that arises there, is only an instance of the *Samlakṣyakramadhvani*. Here he quotes Kālidāsa's famous verse in the *Kumārasaṁbhava* (Canto VI. verse 84):

“ एवं वादिनि देवर्षौ पाश्वे पितुरधोमुखी ।
लीलाकमलपत्राणि गणयामास पार्वती ॥ ”

and explains that in this verse the *bhāva*—*lajjā* (modesty)—of Pārvatī is suggested which is to be understood by taking into account the context, viz., the speech of the Sage (Aṅgiras) to her father Himavān about her marriage with Śiva. The suggestion of *lajjā*, though a *Bhāvadhvani*, is an instance of the *Samlakṣyakramadhvani* in that it takes some time for one to understand the context fully. Pārvatī's counting of the lotus-leaves might have been effected by various causes; but the context makes it clear that it is due to her *modesty only* (especially when Sage Aṅgiras opened the topic of her marriage to her father Himavān).

This suggestion of *bhāva* as an instance of *Samlakṣyakramadhvani* is further explained by Jagannātha as none other than a *Vastudhvani*. It has been already said that in the *Rasacarvaṇā* there is necessarily in the cultured spectator a complete absorption of mind and all ideas (except the *svarūpasukhajñāna*) that arise in his mind do vanish. In the instances of *Asaṁlakṣyakramadhvanis* of *Rasa*, *Bhāva*, etc., the *Sahṛdaya* does not, therefore, experience any sequence between the

vācyārtha and vyaṅgyārtha and this leads him to the immediate realisation of Rasa.¹

Vyañjanā—a separate Vṛtti.

In the elucidation of the Saṃlakṣyakramadhvani, Jagannātha discusses various view-points regarding the scope of *vyañjanāvyāpāra*—the power of *suggestion*—which is the most essential or vital feature in Kāvya (poetry). Before he gives his own view, he explains the views of some *Prācīnas*.

Prācīna View (1):—One school says that in the use of *homonyms* one may naturally understand more than one meaning, but when only one meaning would suit the context, the other is *not conveyed by the word by its abhidhāśakti*, since the cognition of the context or of the intention of the speaker completely obstructs that of the other meanings by the hearer; and then by the *vyañjanāvyāpāra* these śabdās convey the non-contextual sense—the *aprākaraṇikārtha*.

This is explained by Mammaṭabhaṭṭa in his verse :—

“ अनेकार्थस्य शब्दस्य वाचकत्वे नियन्त्रिते ।
संयोगाद्यैरवाच्यार्थधीकृद्वापृतिरञ्जनम् ॥”

(Kāvya prakāśa, II Ullāsa, Verse 14.)

(१) “ प्रकटविभावानुभावव्यभिचारिभिरलक्ष्यक्रमतयैव व्यज्यमानो रत्यादिः स्थायिभावो भवति । रसीभावो हि नाम झटिति जायमानालौकिकचमत्कारविषयस्थायित्वम् । संलक्ष्यक्रमतया व्यज्यमानस्य रत्यादेस्तु वस्तुमात्रतैव, न रसादित्वमिति तेषां (अभिनवगुप्तादीनां) आशयस्य वर्णनेन न तदुक्तीनां विरोधः । उपपत्तिस्त्वर्थेऽस्मिन्विचारणीया । ‘रसभावादिरर्थः’ इत्यत्र रसादिशब्दो रत्यादिपरः ”

(Rasagāṅgādhara, p. 107-108.)

“(उपपत्तिस्त्वर्थे इति) - विभावादिप्रतीते रसप्रतीतेश्च विद्यमानस्य सूक्ष्मकालान्तरत्वरूपस्य क्रमस्य सहृदयेनाकलने तस्य विगलितवेद्यान्तरत्वानापस्या रसत्वभङ्गापत्तिः । विगलितवेद्यान्तरत्वञ्च सकलसहृदयानुभवसाक्षिकमिति तत्रापि सम्मतमिति तदुपपत्तिर्बोद्ध्या ॥”

(Rasagāṅgādharaprakāśa, p. 108.)

“When the *saṁyoga*, etc., restrict the *abhidhāśakti* (the primary significative potency) of a *homonym* to a particular sense, the knowledge of the *non-primary* (the *non-contextual*) sense is possible from the *śabda* by its *vyañjanāvyāpāra*.”

Prācīna View (2):—The other school gives practically the same explanation with this difference that the understanding of the context does not anyway obstruct that of the *aprākaraṇikārtha*; but it emphasises that those *śabdas*, according to the intention of the speaker, convey only one idea—the *contextual*—and the *non-contextual* idea would be conveyed only by the *vyañjanāvyāpāra*.

Prācīna View (3):—Another school holds that both the *prākaraṇikārtha* and the *aprākaraṇikārtha* can be known from the word by its *abhidhāśakti* itself and that the cognition of the context or of the intention of the speaker does not in any way hinder that of the *non-contextual* meaning by the hearer, in view of the fact that the expressions like *payaḥ ramaṇīyam* convey the idea (even to a hearer of an average learning) that *milk and water are nice and beautiful*!, though the statement is made in connection with *milk*. And it questions the propriety of a separate potency—*vyañjanā*—to convey the *non-contextual* sense of a homonym by raising two alternatives: whether *vyañjanā* is to be accepted in all homonyms or in some only. The first alternative is held to be untenable on the assumption that the knowledge of the intention of the speaker is *not a necessary condition* even for that of the primary meaning and that the *tātparyajñāna* is helpful to the understanding of a word as correct in its usage. The second alternative is not accepted on the ground that nothing can be definitely said as the invariable condition for the adoption of *vyañjanā*. The *tātparyajñāna* cannot be said to be the basis of *vyañjanā* (since it is related to *abhidhā* as well and) since the expounders of *vyañjanā* accept *vyañjanāvyāpāra* as *suggestive* of *atātparyārthas* even. Nor can it be affirmed that the cultured reader possesses an extraordinary *śakti* by which he can appreciate the *suggestiveness* of poetry in the case of beautiful *nānārthaśabdas*, in view of the fact that the same can be said to be conveyed by the *abhidhāśakti* (which produces the *arthapratīti* in reference to the context). Even the argument that some homonyms (*nānārthaśabdas*) convey *obscure* ideas by *vyañjanā* as in the example—

‘जैमिनीयमलं घत्तेरसनायामयं द्विजः’

which cannot be conveyed by the *abhidhāśakti* on account of the *bādha-pratyaya* (as in the instance—‘वद्विना सिञ्चति’) falls to the ground since

even in such instances of *bādhapratyaya*, there arises *invalid śābda-bhodha* ; otherwise no instance of *atiśayokti* like—

“सौधानां नगरस्यास्य मिलन्त्यर्केण मौलयः”

(which involves such *bādhā*) can be satisfactorily explained in its *primary sense*.

Jagannātha's View :—Jagannātha's own opinion on this question is that there is definite scope of *vyañjanā* in *nānārthaśābdas* if there is *upamā*—similarity and parallelism—between the *prākaraṇikārtha* and the *aprākaraṇikārtha* to be suggested. cf. ‘प्राकरणिकाप्राकरणिकयोरर्थयोरुपमायान्तु सा कदाचित्स्यादपीत्यत्रास्माकं प्रतिभाति’ ॥ (*Rasagaṅgādhara*, p. 116.)

But not satisfied with this scope of *vyañjanā*, Jagannātha further argues that the power of *vyañjanā* in a *Kāvya* can be clearly exemplified by the *yogarūḍha* words, when they are also used in their *derivative sense*. In such instances neither by *abhidhā*, nor by *lakṣaṇā*, do the words convey the derivative sense, except by *vyañjanā*. It is an admitted fact that the *yogarūḍhaśābdas* convey by their *abhidhāśakti* those derivative ideas that are restricted by *rūḍhi* : for example, the word *pañkaja* conveys the idea of the lotus that is produced from the mud, and not other species like the lily originating from the mud. Nor can it be argued that the derivative ideas are conveyed by those words by the power of *lakṣaṇā*, since there is no ground for *lakṣaṇā*, viz., *absurdity (anupapatti)* of the primary meaning in the context. So the adoption of a third potency of *śābda* viz., *vyañjanā* is essential to explain the derivative ideas of a *homonym*. Jagannātha sums up this discussion in the verse :—

‘योगारूढस्य शब्दस्य योगरूढ्या नियन्त्रिते ।

धियं योगस्पृशोऽर्थस्य या सूते व्यञ्जनैव सा ॥’

(*Rasagaṅgādhara*, p. 118.)

“When the derivative sense of a *yogarūḍha śābda* is restricted by the *rūḍhi* sense, the purely derivative sense of that word is to be conveyed (by that word) by the potency—*vyañjanā*.” He illustrates it by the example :—

“अबलानां श्रियं हत्वा वारिवाहैः सहानिशम् ।

तिष्ठन्तिचपला यत्र स कालस्समुपास्थितः” ॥

(*Rasagaṅgādhara*, p. 116.)

“That time is come when the lightnings which have robbed the beauty of handsome females, shine incessantly in the company of clouds.” Here the words ‘*abalā*’, ‘*vārivāha*’ and ‘*capalā*’, all *yogarūḍha* words when, taken in their derivative senses, suggest the beautiful idea that some unchaste females having stolen the wealth of people who are wanting in strength to resist them, wander in the company of some upstarts carrying water.

Jagannātha has thus analysed the scope of *vyañjanā* both in the *nānārthaśabdās* and in the *yogarūḍhaśabdās* and justified the *prācinās*’ position in accepting the employment of *vyañjanāvyāpāra* in instances of the *nānārthaśabdās* without even the *upamādhvani*, by the statement that the employment of *vyañjanā* in such cases would save much trouble in the understanding of the non-contextual meaning, though this would not help one in the establishment of the power of *vyañjanā*—suggestion—as the vital element in a *kāvya*.

Fourteen conditions deciding the contextual meaning of Homonyms.

In connection with the explanation of the homonyms, Jagannātha, just like Mammaṭabhaṭṭa, elucidates 14 conditions by which the *abhidheyārtha* of a homonym in a sentence is to be determined. They are given in the two oft-quoted *kārikās* :—

1“ संयोगो विप्रयोगश्च साहचर्यं विरोधिता ।
अर्थः प्रकरणं लिङ्गं शब्दस्यान्यस्य तन्निधिः ॥
2सामर्थ्यमौचित्यं देशः कालो व्यक्तिः स्वरादयः
शब्दार्थस्यानवच्छेदे विशेषस्मृतिहेतवः ॥ ”

Their purport (as given in the latter half of the second verse) is that they help one to understand the really intended idea of the word if there is a doubt on its nature.

Those 14 conditions may be thus briefly noted :—

(1) *Saṁyoga* is the relation or property that is well-known as resting on the object conveyed by the homonym by its *abhidhāśakti* ;

1. Bhartṛhari’s *Vākyapadiya*, Kāṇḍa II, Verse 317 begins : ‘संसर्गो विप्रयोगश्च
etc.

2. Bhartṛhari’s *Vākyapadiya*, Kāṇḍa II, Verse 316, runs thus :

‘वाक्यात्प्रकरणादार्थादौचित्याद्देशकालतः ।
शब्दार्थाः प्रविमज्यन्ते न रूपादेव केवलात् ॥’

not only that, it should not be also known as that resting on any other object conveyed by that word (by its abhidhāśakti). In the example, 'सशङ्खचक्रो हरिः' the relation, viz., the contact of one with the two symbols—*śaṅkha* and *cakra*, which is well-known as *resting on Viṣṇu and none else*, determines the sense of the homonym 'hari' as 'viṣṇu'.

(2) *Viprayoga* is *viśleṣa*—removal of that property (described under *Samyoga*). In the example 'अशङ्खचक्रो हरिः' the idea expressed by the compound 'अशङ्खचक्रः' viz., the removal of the two symbols *śaṅkha* and *cakra* (once existing) determines the meaning of the homonym 'hari' as *viṣṇu*.

(3) *Sāhacarya* is mutual contact or interdependence in a common cause; for example, in the compound 'रामलक्ष्मणौ' both Rāma and Lakṣmaṇa are spoken of as *mutually related* (by birth and in a common cause); and this relation determines the meaning of the homonym 'rāma' as the son of *Dāśaratha*.

(4) *Virodha* has two aspects: (i) the well-known enmity and (ii) non-co-existence. The first is generally illustrated by the example—'रामार्जुनगतिस्तयोः' which refers to two people whose behaviour resembles that of Rāma and Arjuna. Hence the word 'rāma' refers to Paraśurāma (and none else) who is well-known in Indian Mythology as a *great enemy of Kārtavīryārjuna*. The second is illustrated by the example—'छायातपौ' Here the *non-co-existence between shade and light* is so well-known and so it determines the sense of the ambiguous word 'chāyā'.

(5) *Artha* is the fruit conveyed by *dative case*, *infinitive*, etc. In the example 'स्थापुं भज भवच्छिदे' the idea conveyed by the dative case in the word 'bhavacchide' (the fruit, viz., the *destruction of the tie of the saṁsāra*) determines the sense of the word 'sthāpu' as 'Śiva'.

(6) *Prakarana* is the context known to both the hearer and the speaker. In the instance 'सर्वं जानाति देवः' when it is said by a servant to a king, the word 'deva' means only the *king* and none else. Hence the context determines the meaning of the ambiguous word 'deva'.

(7) *Liṅga* is a symbol or a particular property. It also, when expressed by a word, determines the meaning of a *nānārtha* word. This

is illustrated by the example 'कुपितो मकरध्वजः' the कोप (anger) conveyed by the word 'कुपितः' determines the meaning of the word मकरध्वजः' as *cupid* and not the ocean.

(8) *Anyasābdasannidhi* is the usage of two *nānārtha śabdās* each determining the meaning of the other. In the instance 'करेण राजतेनागः' the words 'करेण' and 'नागः' both being *nānārthasābdās* determine the meanings as *trunk* and *elephant* respectively in that the *elephant alone shines with its trunk*.

(9) *Sāmarthyā* is causation. In the example 'मधुना मत्तः कोकिलः' (the cuckoo is passionate in the spring season) the cause of passion is the advent of spring. So the word *madhu* means only *vasanta-rtu* (spring season).

(10) *Aucitī* is propriety and capability. It is illustrated by the passage 'पातु वो दयितामुखम्' Here the word *mukha* means *face* of the beloved in a happy mood, which alone is capable of pleasing the love-lorn people.

(11 & 12) *Deśa* and *Kāla* are place and time which also determine the meaning of a *nānārtha* word in a sentence. In the instance 'भात्यत्र परमेश्वरः' the word *atra* referring to a particular place—kingdom or city—determines the meaning of the word *parameśvara* as the king of that place. Similarly, in the example, 'चित्रभानुर्दिने भाति' the word 'dine' which means 'in day-time' determines the sense of the word 'citrabhānu' as the *Sun*.

(13) *Vyakti* is interpreted as the gender of a word. In the instances 'मित्रो भाति' 'मित्रं भाति' the masculine gender of the word *mitra* determines its meaning as the *Sun* while the neuter gender, as the *friend*.

(14) *Svara* is the accent of a word. In the famous Vedic example—**इन्द्रशत्रुर्वधस्व**, the *antodāttasvara* and the *pūrvapadaprakṛtisvara*, viz., *ādyudātta*, determine the kind of compound : i.e. if it is *antodātta*, it is *tatpuruṣa* in the sense of the *destroyer of Indra*, and if it is *ādyudātta*, it is *bahuvrīhi* in the sense of one who possesses Indra as one's *destroyer*.

Further Classification of Dhvani.

After the elucidation of the 14 conditions which determine the meaning of a homonym, Jagannātha further takes up the classification (with illustrations) of the Saṃlakṣyakramadhvani (which is one of the two main varieties of the Abhidāmūlakadhvani). It is first divided into Śabdaśaktimūladhvani, Arthaśaktimūladhvani and Ubhayaśaktimūladhvani. The first is further divided into Vastudhvani and Alaṅkāradhvani and the second, into eight varieties under Vastu and Alaṅkāra and under the varieties of the Vyañjakavastu, etc.—Svastassambhavi, Kaviprauḍhoktisiddha, Kavinibaddhavaktṛprauḍhoktisiddha.

The other well-known variety of Dhvani on the basis of the lakṣyārtha is the Lakṣaṇāmūladhvani, more popularly known as the *Avivakṣitavācya*. It is divided into *Jahatsvārthāmūla* (Atyantatiraskṛtavācya) and *Ajahatsvārthāmūla* (Arthāntarasaṅkramitavācya). All these varieties Jagannātha explains and illustrates as well.

(To be continued.)

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SABAPATHI VILASA NATAKA

-Mm. Dandapaniswami Dikshitar.

सभापतिविलासनाटके पञ्चमोऽङ्कः ।

(नेपथ्ये)

नीत्वा कल्पशतोपमानि फणिनां पत्या समं कानिचित्
संख्यातानि दिनानि पुण्यकथया स्तोत्रेण मन्त्रेण च ।
संप्राप्ते गुरुपुण्ययोगमहिते मध्यन्दिनस्यात्मजः
तस्मिन्नहि शिवस्य ताण्डवमसौ द्रष्टुं समुत्कण्ठते ॥ १ ॥

(चूलिका)

(ततः प्रविशति व्याघ्रपादः सहोपमन्युकौण्डिन्याभ्यां पतञ्जलिश्च ॥)

व्याघ्रपादः—सखे ! परमशिवप्रसादसंविभागदायाद ! कच्चित्पूरयिष्यति मनोरथम-
स्माकमम्बिकागृहमेधी ?

न तथा साम्राज्यसुखान्न सुधास्वादान्नवापरज्ञानात् ।
तोषो यथाजनानां मनोरथेनैव पूर्णेन ॥ २ ॥

पतञ्जलिः—(विहस्य) सखे ! व्याघ्रपाद ! कोऽयं भगवद्वचनेऽपि सन्देहः ?

व्याघ्रपादः—तर्हि चित्सभाभ्यन्तरमधिगत्य भगवदागमनं प्रतिपालयामः ।
(सर्वे तथेति वीथीप्रवेशमभिनयन्ति)

उपमन्युः—पुरोऽवलोक्य (सहर्षम्) अहो ! रामणीयकमनवद्याया निषद्याया-
इयं हि—अद्य तावदतिहृद्यवाद्यमानवीणावेणुपणवगोमुखश्च लरीमुख-

विविधवाद्यमुखरितविशङ्कटहाटकमकुटपरिवाटिकोपचीयमानसमीचीनभाव -
 मर्मनिर्मितनर्महर्म्यशृङ्गसङ्घटितकाञ्चनकेतुपरिपाटीसमाटीकमानकान्तिधाटी -
 चित्रियमाणगगनाभोगा समन्ततः सिच्यमानहिमसलिलपृषतसन्दोहतुन्दि-
 लमन्दतरगन्धवहविलासनानख्यमानमन्दारपल्लवसन्दितस्य भन्दनमालिकास -
 मिन्धानरुचिबन्धसन्धीयमाना वन्ध्यादरसकलपौरसमुत्तम्भितद्वारकायमानम-
 णिस्तम्भपरिष्काररा जरम्भाप्रकदम्बक्रमुकपुण्ड्रेक्षुरुचिकवचमेचकितधरणीतला
 वेलाविलंघिकुतुकीनीलालकाजनमणिमयभूषणकिरणकल्प्यमानशातमखशरा -
 सनशतदन्तुरितदिग्विभागा ससम्भ्रमसमुच्चलितशैवजनरुद्राक्षमालिकापर-
 स्परासङ्गप्रवृत्तघणघणारणितनिष्पीतशब्दान्तरा निरन्तरविकीर्यमाणघनसार-
 घुसृणसौरभीसमुद्भ्रान्तलोलम्बकदम्बमुखरिता वेदिकान्तरवितानविलम्ब
 मानविकचचम्पककुटजपूथिका वीथिका ।

व्याघ्रपादः—वत्स ! पश्य पार्श्वयोरेतस्याः

मृदुलपवनासङ्गप्रोद्धोलकाञ्चनतोरण-
 प्रकररभसाकृष्टोन्मुक्ता मुहुर्ध्वजराजयः ।
 मधुरमधुरं जल्पाकीभिः मणीमयघण्टिका-
 ततिभिरभितः चित्रं क्रीणन्ति पश्य चिराय नः ॥ ३ ॥

पतञ्जलिः—(सर्वतो निर्वर्ण्य) अहो ! प्रमोदातिशयः पौराणाम् ।

धूलीभिः कौङ्कुमीभिः कचन विदधते विभ्रमं सान्ध्यमेके
 पङ्क्तैःकस्तूरिजैःकेऽपिच घननिकरं कुत्रचिद्वर्तयन्ते ।

१. स्यब्दनमालिका गृहद्वारतोरणम् भाषायां ।

“ वा ५ ला १० ” इति प्रसिद्धा.

आकल्पैः केऽपि पौष्पैः कचिदुडुपटलं प्रौढमादौक्यन्ते
कार्पूरैर्द्राक्परागैः कतिचन कुहचिच्चन्द्रिकां सान्द्रयन्ते ॥ ४ ॥

कौण्डिन्यः—तदो इदो दिण्णहियऐहिं अम्मेहिं णमुणीओ महन्तो कालादिपादो
जदो दिवसस्स तिभाअं अलंकुणन्तो एहिं एसो ।

मोहेहिं भुवणन्धआरहरणामोहेहिं अम्भोरुहे
पासुत्ताण महुणि गेह्मिअ मदा पुप्पन्धयाणं चिरम् ।
पच्चगाम्बुइणीदलन्तखुहरे वासक्कवाञ्छावहो
तेलोकैकविलोअणो विअअदे णालीइणीणाअओ ॥ ५ ॥

(छाया) — तत इतो दत्तहृदयैरस्माभिः न ज्ञायते महान्कालातिपातः । यतो
दिवसस्य त्रिभागं अलङ्कुर्वन्निदानीमेषः—

“ मयूखैर्भुवनान्धकारहरणामोघैरम्भोरुहे
प्रसुप्तानां मधूनि गृहीत्वा मदात्पुष्पन्धयानां चिरम् ।
प्रत्यग्राम्बुजिनीदलान्तकुहरे वासैकवाञ्छावहः
त्रैलोक्यैकविलोचनो विजयते नालीकिनीनायकः ॥

व्याघ्रपादः—सखे ! पतञ्जले ! बालोऽप्ययं सदृशं वर्षीयसः समाख्याति । तद्वयं
सभासविधमुपसर्पामः ।

(तथेति सर्वे सभासमीपमुपसर्पन्ति)

पतञ्जलिः— (अञ्जलिं बध्वा)

निष्कर्षोऽसौ पावनानां निदानं
कल्याणानां, कारणं शैवभक्तेः ।

मोक्षद्वारं मोहभाजोऽपि जन्तोः
दिष्ट्या सेयं दृक्पथे दिव्यगोष्ठी ॥ ६ ॥

उपमन्युः—हन्त ! मनसोप्यगोचरो महिमा ; किं पुनर्वचसः, हेमसंसदः ।

व्याघ्रपादः—दुरधिगममहिम्नो महाकुहनानाटकसूत्रधारस्य भगवतः प्रियेयं किल रङ्ग-
भूमिः ॥ अतः पश्य—

अष्टावस्याः कुलशिखरिणःस्तम्भलीलां वहन्ते
लोकाश्चोर्ध्वं षडपि दधते तत्तुलाशिल्पशोभाम् ।
विस्तारोऽयं हसति विविधद्वीपधार्त्री धरित्रीं
चित्तस्यायं पथि किमु भवेच्चित्सभायाः प्रभावः ॥ ७ ॥

पतञ्जलिः—समन्तता निर्वर्णयामः (इति कर्तृचित्पदानि गत्वा साश्चर्यम्)

ज्वलत्तपनसप्रभा भसितपुण्ड्रनित्योज्ज्वलाः
विशुद्धमखिलं जगद्विदधतः कटाक्षोर्मिभिः ।
शिवार्चनसुधाझरीप्रशिथिलान्यलभ्यादराः
त्रयो निगमसागरा धुरि सहस्रमेते द्विजाः ॥ ८ ॥

कर्णदत्ता ! (किं ब्रूथ ? “ परमशिवस्येव युवयोरपिदर्शनं प्रार्थयामहे ” इति)
किमेवमभिधातव्यमायुष्मद्भिः । अस्माकन्तु लब्धमेव परमशिवदर्शनं ; किन्तु परमानन्द-
ताण्डवदर्शनमभ्यर्थयामहे ।

(इति परिक्रम्य पुरोऽवलोक्य)

तरङ्गाणां चन्द्रोदयतरलितस्येवजलधेः
प्रवाहाणां वर्षास्विव दिविजसिन्धोः तटभिदः ।

ततश्चेतश्चापि द्रुतगमनमागत्य चरतां
नराणामत्रायं किमपि समवायो विजयते ॥ ९ ॥

(नेपथ्ये शंखध्वनिः)

व्याघ्रपादः—(ऊर्ध्वमवलोक्य) कथमयमम्बरमध्यमारुढो भगवानंशुमाली !

नीरन्ध्रद्युतिधोरणीविकिरणक्रीडत्पतङ्गोपल-
ज्योतिश्चक्रपरंपराक्रमदुरालोकक्षमामण्डलः ।

लोकान्हेमसभां नयन्पशुपते द्रष्टुं ध्रुवं ताण्डवं
तैरिस्थं स्वयमप्युपैति गगनक्रोडं रुचां नायकः ॥ १० ॥

(निश्चस्य) हन्त नाद्यापि भगवदागमनचिह्नानि ! अथवा कायमतिविषमविविध-
विषयकषायदूषितस्वान्तपरिपाको लोकः ? कचापितदकलङ्कनिस्तरङ्गहृदयमुनिजन-
संवेद्यमानमानन्दताण्डवमीश्वरस्य सर्वथा गगनकुसुममवतंसयितुकामस्य सरणिमनु-
सृताः स्मः ॥

पतञ्जलिः—सखे ! व्याघ्रपाद ! माभैषीः नाद्यापि अतिवतते भगवदागमनसमयः ।

व्याघ्रपादः—सखे ! न विधुबिम्बादमृतादन्यन्निस्सरति । पश्य—

निर्दिष्टो विभुना स एव जगतां नेत्रोत्सवो वासरः
सा चेयं हि सभैव या पशुपते रिष्टेति शिष्टेरिता ।

षष्ठं भागमलङ्करोति भगवानंहश्च भासांपतिः

पश्यामो न मनीषितस्य च लवं हा ! वञ्चिताः शम्भुना ॥ ११ ॥

उपमन्युः—तात ! नहिभक्तजनस्य शोकमुत्पादयति देवः ।

पतञ्जलिः—सखे ! नापराद्धा भवति पारमेश्वरी प्रतिज्ञा ।

व्याघ्रपादः—सखे ! आश्वासनशीलः खल्वसि ।
(नेपथ्ये दुन्दुभिध्वानः)

पतञ्जलिः—वयस्य ! यथायं अभिनवजलसंभारगम्भीरमांसलवलाहकस्तनितसब्रह्मचारी
देवदुन्दुभिध्वनिः श्रूयते तथा देवेन सन्निहितेन नटराजेन
भवितव्यम् ।

(सर्वे सानन्दमाकर्णयन्ति)

पतञ्जलिः—(ऊर्ध्वमवलोक्य) कथमुपर्युपरि पतद्भिरापूर्यते गगनमण्डलममृतान्धोभिः

उपमन्युः—(साश्चर्यम्)

नभश्चरविलासिनीकरविसृष्टकल्पद्रुम-

प्रसूनघनसौरभीधुमधुमायमानान्तराः ।

कथं निबिडसंपतद्विबुधलोकभूषामणी-

गणद्युतिविचित्रिताः किमपि तिल्ववन्या भुवः ॥ १२ ॥

कौण्डिन्यः—पेच्चह सण्णिहिदो भवन्तो जम् विअसिअकमलसहस्सभूसिओपरिपददिः
भाईरहीप्पवाहो ।

(छाया) पश्यत सन्निहितो भगवान् चन्द्रशेखरः । यद्विकसितकमलसहस्रभूषित
परिपतति भागीरथीप्रवाहः ।

उपमन्युः—(विहस्य) वत्स ! नासौ भागीरथीप्रवाहः ।

नयननिकरैश्चित्रं गात्रं निजं पुरविद्विषे

कमलकलिकानद्धां मुग्धामिव स्रजमर्पयन् ।

हिमकरकराकारं हारं वहन्नुरसा रयात्
अयमवतरन्नाकात्पाकाहितः समुदीक्ष्यते ॥ १३ ॥

(सर्वे ससंभ्रमं पश्यन्ति)

पतञ्जलिः—इतश्च—

तार्त्तीयिकं पुरारातेरीक्षणं पुरशोषणम् ।
आविरस्ति महः किञ्चिदाम्नायगृहमेधि यत् ॥ १४ ॥

कौण्डिन्यः—(सभयम्) हंहो विअडणअणवदणभूमङ्गभअङ्करा महाभूदा
(छाया)हन्त ! विकटनयनवदनभूमङ्गभयङ्करा महाभूताः ।

उपमन्युः—वत्स ! माभैषीः

पडुक्ष्वेडाटोपक्षुभितजगदण्डान्निजगणान्
कटाक्षैः साकूतैः किमपि गमयन्प्रीतिमधिकाम् ।
प्रियः पुत्रो भानोर्महिषवरपृष्ठेऽतिविपुले
करं वामं न्यस्यापतति समवर्ती सभगवान् ॥ १५ ॥

व्याघ्रपादः—(पुरोऽवलोक्य)

करधृतमहाखङ्गः प्रेतासनः कटुगर्जित-
क्षुभितजगतीचक्रो वक्रोन्नतोन्नतनासिकः ।
अहह वपुषा लोकं भीतिन्नयन्नतिभीषणां
गगनसरणिं रुन्धे हन्तेह को रजनीचरः ॥ १६ ॥

पतञ्जलिः—स एष दिक्पालचूडामणिः निर्ऋतिर्नाम ।

व्याघ्रपादः—

कटकमकुटीमुख्याकल्पान्तरालसमुन्मिष-
 न्मरकतरुचां वृन्दैर्विस्तारयन्नपराम्बुधिम् ।
 रुचिकवचिताकाशं पाशं करेण विघूर्णयन्
 पतिरयमपां पन्थानं नः परिष्कुरुते दृशोः ॥ १७ ॥

पतञ्जलिः—

नभोन्तरनिरन्तरप्रसवकन्दलीदन्तुराः
 लसत्कुसुममोदितभ्रमरवृन्दगोष्ठीभिदः ।
 अमी श्रमविनोदिनः किमपि गन्धवाहाङ्कुराः
 वलन्ति सुरसुन्दरीचिकुरबन्धगन्धोर्मिलाः ॥ १८ ॥

व्याघ्रपादः—(सफलमिदानीं जन्म, यतः)

अस्तोकैरलकापुरीसहचरैराविर्भवद्भिर्ग्रहैः
 शंखाद्यैर्निधिभिश्चिरेणनवभिः सन्दिष्टवर्त्मा पुरः ।
 प्रायो गुह्यकयक्षकिन्नरगणैर्नारन्त्रयन्नम्बरम्
 देवस्यापि सखा सुखाय धनदो दिष्ट्या दृशोर्वर्तते ॥ १९ ॥

उपमन्युः—(साञ्जलिबन्धम्)

चतसृषु दिशासु देवागमनं प्रतिपालयन्निजैर्वदनैः ।
 प्रविशति दभ्रसभान्तरमयं विधाता समं गिरां देव्या ॥ २० ॥

पतञ्जलिः—(सानन्दं सगद्गदञ्च) सखे ! उपर्युपर्युत्सवं प्रमोदामहे यदयमक्षिपथमवतीर्णो
 लक्ष्मीपतिः । पश्य-

॥ शक्तिविमर्शः ॥

(पूर्वतोऽनुवृत्तः)

॥ वे. सुब्रह्मण्य शास्त्री ॥

॥ अण्णामलैविश्वविद्यालयः ॥

यदपि बौद्ध एवार्थः शक्यः । बौद्धयोरेव शब्दार्थयोस्तादात्म्यमिति । तदपि बौद्ध-
पदार्थाप्रसिद्ध्या न संभवति ।

(१) यदुक्तम् घटोऽस्ति, घटो नास्ति, इति प्रयोगोपपत्त्यर्थं बौद्धार्थः स्वीकार्य इति ।

तत्र । यद्यपि बाह्यो घटः घटपदशक्यः । तथापि तन्निष्ठं बाह्यसत्त्वम्
न तच्छक्यतावच्छेदकम् । अतएव घटपदजन्यशब्दबोधे बाह्यसत्त्वं न भासते । तथाच
घटपदेनानवगतसत्ताया बोधनाय अस्तिपदं प्रयोक्तव्यमेव । यदि घटपदेन घटत्व-
विशिष्टस्य बोधेऽपि घटत्वेन तत्र बाह्यसत्त्वमनुमातुं शक्यमित्यन्यलभ्यत्वादस्तिपदप्रयोगा-
नर्थक्यमित्युच्यते । तदा घटत्वेन द्रव्यत्वप्रमेयत्वादेरनुमातुं शक्यत्वेन अन्यलभ्यत्वात्
घटो द्रव्यम्, घटः प्रमेयः इत्यादिप्रयोगोऽप्यनर्थकः स्यात् । एवं घटो नास्तीति वाक्या-
च्छाब्दबोधो न जायते । अनुयोगिविनिर्माणेन नञः अभावबोधकत्वस्याव्युत्पन्नत्वात् ।
अनुयोगिवाचकपदस्य चात्राभावात् । परन्तु भूतले घटो नास्तीत्येव प्रयोगः । तत्रच
सप्तम्यर्थो निरूपितत्वम् । असप्तात्वर्थश्चाधेयत्वम् । तथाच भूतलनिरूपितवृत्तित्वाभाव-
वान्घटः इति बोधो जायते । सति तात्पर्ये घटाभावो भूतलवृत्तिः इत्यपि बोधो जायते ।
घटपदबोध्यस्य बाह्यसत्तावत्त्वेऽपि भूतलवृत्तित्वाभावसंभवति । बाह्यसत्तायाः प्रदेश-
विशेषवृत्तित्वाभावेन विरोधाभावात् । तस्मान्न तद्वाक्यप्रयोगानुपपत्तिः । प्रत्युत पदबोध्यः
बौद्धसत्ताविशिष्ट एवेति वादिनामेव घटोऽस्ति, नास्तीति प्रयोगोऽनुपपन्नः । अस्ति-
पदमपि बौद्धसत्तामेव बोधयेत् । न बाह्यसत्ताम् । पदत्वाविशेषात् । एवञ्च घटपदेनैव
तन्निष्ठबुद्धिसत्ताया बोधितत्वात् ‘उक्तार्थानामप्रयोगः’ इति न्यायेन अस्तिपदप्रयोगोऽनर्थकः ।
एवम् घटोनास्तीत्यत्रापि घटे बौद्धसत्ताभावो बोधनीयः । सचाभावः घटपदबोध्य-
बौद्धसत्ताविरोधी । नास्तिपदेन बाह्यसत्ताभावो न बोधयितुं शक्यते । सर्वपदानां

बौद्ध एवार्थः शक्य इत्यङ्गीकारात् । तथाच घटो नास्ति इति प्रयोगो नोपपद्यते । तस्मान्न घटोऽस्ति, नास्तीति प्रयोगोपपादनाय बौद्धार्थस्वीकार्यः ॥

(२) यच्चोक्तम् शशशृङ्गं नास्ति, अङ्कुरो जायते, इति वाक्यजन्यशाब्द-
बोधान्यथानुपपत्त्या बौद्धार्थसिद्धयतीति ।

तदपि न । केवलशशशृङ्गपदमपार्थक्यमेवेति प्रतिपादितमुद्यनाचार्यैः । शशशृङ्गं नास्तीतिवाक्याच्च शशविशेष्यकशृङ्गाभावप्रकारकः शाब्दबोधो जायते । बोधविषयस्य, शशस्य, शृङ्गस्य, तदभावस्य च प्रसिद्धत्वात् कथं बोधानुपपत्तिः । यद्यपि अत्यन्ताभाव-
विषयकशाब्दबोधे सप्तम्यन्तानुयोगिवाचकपदसमभिव्याहारः कारणम्, प्रकृतवाक्ये च शशपदं न सप्तम्यन्तम्; तथापि शशशृङ्गादिपदजन्यपदार्थोपस्थितिमूलकः शशे शृङ्गाभावः इत्याकारको मानसबोधो जायते । तादृशमानसबोधजननेच्छयैव व्युत्पन्नाः शशशृङ्गं नास्तीति प्रयुज्यते । स्पष्टञ्चेदमभिहितम् “ शशशृङ्गं नास्तीति च शशे शृङ्गाभाव इत्यर्थः ” इति मणिविवरणावसरे भट्टाचार्यैः । एवम् अङ्कुरो जायते इति वाक्यात् अङ्कुरः उत्पत्त्याश्रय इति बोधः । यद्यपि बोधविषयः अङ्कुरः बोधकाले नास्ति, तथापि न बोधानुपपत्तिः । प्रत्यक्ष एव विषयस्य कारणत्वात् । शाब्दबोधे विषयस्याकारणत्वात् । नच ज्ञानसामान्ये विषयः कारणमिति वाच्यम् । अतीतानागतादिविषयकपरोक्षज्ञानोदयेन तथा कार्यकारणभावस्य वक्तुमशक्यत्वात् । नच अतीतादिस्थलेऽपि बौद्धार्थस्य सत्त्वान्न कार्यकारणभावानुपपत्तिरिति वाच्यम् । बौद्धार्थसाधनावसरे सिद्धवत्तथा कथनस्यासंगतत्वात् । तस्मान्न शशशृङ्गं नास्ति, अङ्कुरो जायते, इति वाक्यजन्यबोधानुपपत्त्या बौद्धार्थसिद्धिः ॥

(३) ज्ञाने विषयः कारणमित्यस्य, विद्यमानस्यैव ज्ञानं जायते इति सारार्थः । अविद्यमानपदार्थस्मरणस्य तथाविधानुमितेः शाब्दबोधस्य चानुभवसिद्धत्वेन तथा कार्यकारणभाव एव नास्ति । अस्तु यथाकथञ्चित् कार्यकारणभावः । तथापि न बौद्धार्थः स्वीकार्यः । विषयतासंबन्धेन ज्ञानं प्रति तादात्म्येन विषयः कारणमिति विषयनिष्ठप्रत्यासत्त्या कार्यकारणभावोभवात् । नच तादात्म्यसंबन्धस्य वृत्त्य-
नियामकत्वेन कारणे कार्याधिकरणवृत्तित्वम् न निर्वहतीति वाच्यम् । कारणस्य कार्याधिकरणसंबन्धित्वमेवापेक्षितम् नतु वृत्तित्वमिति तथा कार्यकारणभावे दोषा-
भावात् । यद्यपि संयोगस्संबन्धः विद्यमानयोरेव । तयोरेव संयोगप्रतीतेः । विषयत्वलक्षणस्संबन्धश्च, अतीतपदार्थविद्यमानस्मरणादिज्ञानयोरपि । नेदानीं देवदत्तोऽस्ति परन्तु स्मर्यते (स्मरणविषयः) इत्यबाधितप्रतीतेः तत्साधिकायास्सत्त्वात् ।

स्पष्टश्चायमर्थः वैयाकरणभूषणसारे, दीर्घे च सुबर्थनिर्णये अतीतादेः जानातिकर्मत्वोप-
पादनावसरे । एतेन “अतीतानागतस्थले संबन्धस्य वक्तुमशक्यत्वाच्च” इति दूषणमनव-
काशम् । तथाच ज्ञानविषययोः कार्यकारणभावनिर्वाहकसामानाधिकरण्योपपादनाय न
बौद्धार्थः स्वीकार्यः ॥

(४) यदपि कीदृशो देवदत्त इति प्रश्नोत्तरवाक्यघटक ‘ईदृश’ पदस्वारस्या-
द्बौद्धार्थसिद्धिरिति ।

तदपि न । ईदृशपदात् समभिव्याहृतवाक्यप्रतिपाद्यधर्मविशिष्टविषयक एव
बोधोऽनुभवसिद्ध इति तत्पदस्य समभिव्याहृतवाक्यप्रतिपाद्यत्वोपलक्षितधर्मविशिष्टे शक्तिः ।
नत्वेतत्सदृशे तथा बोधाभावात् । नच प्रकृतिप्रत्ययविवेचनेन एतत्सदृशार्थकत्वमेव प्रतीयत
इति वाच्यम् । घट चेष्टायामिति धातोर्निष्पन्नो घटशब्दः चेष्टावद्वाचक इति भाति ।
परन्तु घटपदात् घटत्वजातिविशिष्टस्यैव बोधात् तस्य घटत्वविशिष्टे शक्तिः । नतु
चेष्टाविशिष्टे । एवमेव मय ज्ञाने इति धातोर्निष्पन्नो मायाशब्दः अज्ञानवाचकः ।
स्पष्टश्चायमर्थः अद्वैतैसिद्धौ अज्ञानवादे । तथाच ईदृशपदस्य समभिव्याहृतवाक्यप्रति-
पाद्यत्वोपलक्षितधर्मविशिष्टे शक्तिरिति तस्मान्न सादृश्यबोधः । एवञ्च देवदत्तव्यक्तेरैक्येऽपि
न कोऽपि दोषः । तस्मान्नैतदनुरोधेन बौद्धार्थः स्वीकरणीयः ॥

(५) यच्चोक्तम् “बुद्धिसिद्धन्तु तदसत्” इति सूत्रकर्तुर्गौतमस्यापि बौद्धार्थः
संमत इति ।

तदपि न । पूर्वापरसन्दर्भपर्यालोचनया, भाष्यतात्पर्यटीकादिपर्यालो-
चनया च अन्यादृशार्थे तत्सूत्रतात्पर्यावधारणात् । तथाहि फलपरीक्षायाम्,
अमिहोत्रादेः कालान्तरभाविस्वर्गफलकत्वं व्युत्पाद्य, तन्निर्वाहकञ्च अपूर्वं (अदृष्टं)
निरूप्य, निष्पद्यमानं प्राङ्निष्पत्तेः नासत्, उपादाननियमात्, नसत्, विद्यमानस्यो-

१. भू. सा. १३१, १३२ पृष्ठे.

अतीतानागतस्थलेऽपि ज्ञानजन्यस्य आवरणभङ्गस्यावश्यकत्वात् । अन्यथा यथापूर्वं
न जानामीति प्रतीत्यापत्तेः । अतीतादेराश्रयता च विषयतया ज्ञानाश्रयताया नैयायिकानामिव ।

२. द. विनष्टघटे अनुभवानुरोधात् ज्ञानविषयतास्वीकार आवश्यकः ।

३. अ. सि. ५७१ पृष्ठे

नच मय ज्ञाने इति धात्वर्थानुसारान्माया कथमज्ञानमिति वाच्यम् । घट चेष्टायामिति
धातुजस्यापि घटशब्दस्य चेष्टावाचकत्वाभाववत् अत्रापि ज्ञानवाचकत्वाभावात् ॥

त्यत्त्यभ्युपगमे उत्पन्नस्य पुनरुत्पत्त्यापत्तेः । न सदसत्, विरुद्धयोस्सत्त्वासत्त्वयोरेकत्रा-
संभवात्, इत्याशङ्क्य “उत्पादव्ययदर्शनात्” इति सूत्रेण असत्कार्यवादः स्थापितः ।
उत्पन्नो घटः नष्टो घट इति प्रतीतेः निष्पद्यमानं प्रागसत् इति सूत्रार्थः । उपादान-
नियमाच्च हेतोः निष्पद्यमानं प्रागसन्न संभवतीति शङ्कितम् । साच शङ्का अवश्यं परि-
हरणीया । तस्याः परिहारमाह “बुद्धिसिद्धन्तु तदसत्” इति । कार्यमुत्पत्तेः प्रागसदपि
नियतकारणकत्वेन ज्ञातमिति पटार्थिनः तन्तूनेवोपाददते न मृदमिति सूत्रार्थः ।
तस्मात् असतः उत्पत्तिकर्तृत्वोपपादनपरं तत्सूत्रमिति कथनं न पूर्वोक्तसन्दर्भानुगुणम् ।
नापि तथा व्याख्यानमुपपद्यते । बौद्धस्य पूर्ववर्तित्वेऽपि बाह्यस्य तदभावेन उत्पत्ति-
कर्तृत्वसंभवस्य तदवस्थत्वात् । यद्यपि बाह्यबौद्धयोरर्थयोरभेदाध्यासः भवद्भिः
स्वीकृतः, तथापि बाह्यस्य वस्तुभूतं उत्पत्तिकर्तृत्वं न संभवति । तस्मात्पूर्वोक्तरीत्या
अर्थान्तर एव सूत्रनात्पर्यावगमात् न सूत्रकर्तृगौतमस्य सम्मतो बौद्धार्थः ॥

(६) यदपि गुणसमृद्ध्यादिश्रवणानन्तरम् नलादिपदात्सामान्यतो बुद्ध्या
गृहीताकारविशेषे शक्तिग्रहपूर्वकं तस्यैव बोध इति ।

तदपि न । नलो राजा इत्यादिस्थले च नलपदस्य नलपदबोधे लक्षणा । इत्थञ्च
नलपदबोधः कश्चिद्राजा इत्यनुभवसिद्धः शाब्दबोध उपपद्यते । नच नलपदस्य शक्तिग्र-
हाभावे शक्यसंबन्धरूपलक्षणाज्ञानमपि न संभवतीति वाच्यम् । यत्पदं साधु व्युत्पन्नैः
प्रयुक्तम् तत्पदं किञ्चिद्वाचकमिति सामान्यव्याप्त्या तत्पदशक्तिग्रहसंभवात् । लक्षणाग्रहे
विशिष्यशक्यतावच्छेदकभानस्यानपेक्षितत्वात् । अयञ्च बोधो भवतामपि संमत एव ।
अतएव नलत्वादिप्रकारकान् संस्कारान्कल्पयित्वा, विशिष्य नलत्वप्रकारकबोधमुपवर्णयतः
कस्यचिन्मतं “पदप्रकारकबोधस्यैवानुभवाच्च” इति स्वयं दूषितं संगच्छते ।

न्या—भा. ४०२ पृष्ठे

यत्पुनरुक्तम् प्रागुत्पत्तेः कार्यं नासदुपादाननियमादिति । ‘बुद्धिसिद्धन्तु तदसत्’
इदमस्योत्पत्तये समर्थम् न सर्वमिति प्रागुत्पत्तेः नियतकारणं कार्यं बुद्ध्या सिद्धं उत्पत्तिनियम-
दर्शनात् । तस्मादुपादाननियमस्योपपत्तिः । सति तु कार्यं प्रागुत्पत्तेः, उत्पत्तिरेव नास्तीति ॥

न्या. वा. तात्पर्यटीका ६२२ पृष्ठे.

यद्येकमुपादाननियमादिति, तत्र यदि पुरुषस्योपादाननियमः पटार्थी तन्तूनेवोपादत्ते
न वीरणम् कटार्थी वीरणमिति ततः तदुपादानानां तत्र तत्र कार्यं सामर्थ्यपरिज्ञानात् । तच्च
सामर्थ्यमानुमानिकम् । तदिदमुच्यते बुद्धिसिद्धन्तु तदसदिति । तदसद्भावि कार्यं अनेनैव
कारणेन जन्यते नान्येनेत्यनुमानाद्बुद्धिसिद्धमेवेत्यर्थः ॥

‘पदप्रकारकेति नलपदवाच्यः कश्चिदासीदित्याकारकेत्यर्थः’ इति तदग्रन्थव्याख्या ।
नलरावणादिपदेभ्यः तत्तत्पदबोधयत्वेनैव बोध इति च स्पष्टमुक्तं भट्टाचार्यैः शक्तिवादे ।
तस्मान्न तादृशपदेभ्यश्शब्दबोधनिर्वाहाय बौद्धार्थस्वीकरणीयः ॥

(७) यदपि “ स भूरिति व्याहरत् ” इति श्रुत्या भूरादिशब्दार्थज्ञानपूर्वकमेव
हिरण्यगर्भसृष्टिरिति लाभेन, तदानीञ्च बाह्याया भुवोऽभावेन बौद्धपृथिव्यामेव शक्तिग्रह-
पूर्वकं हिरण्यगर्भस्य बौद्धपृथिवीबोध इति ।

तदपि न । निरुक्तश्रुत्या तत्तद्वाचकशब्दोच्चारणपूर्वकं तत्तत्पदार्थान् सृजतीति
लभ्यते । नतु शब्दादर्थं ज्ञात्वा सृजतीति । नहि स्वस्यैव शाब्दबोधजननार्थं शब्दं
प्रयुज्जानो दृश्यते । वर्णयन्ति च भगवत्पादाः निरुक्तश्रुतेः तत्तद्वाचकशब्दानुसन्धानपूर्वक-
सृष्टिपरत्वं देवताधिकरणे । यदिच “ शिल्पी यथा शिल्पशास्त्रवचनेभ्यो मरुत्वताम् ”
इति न्यायरक्षामण्युक्तन्यायेन हिरण्यगर्भस्य वेदवाक्याच्छाब्दबोध आवश्यक
इत्युच्यते । तदापि न बौद्धार्थस्वीकार्यः । संसारस्यानादित्वाद्विरण्यगर्भस्य जन्मान्तरानु-
भूतभूम्यादिविषयकस्संस्कारो वर्तते । सच सृज्यमानप्राणिकर्मणोद्भूतः । तेन स्मृते
भूम्यादौ शक्तिग्रहः । ततश्च शाब्दबोधस्संभवतीति न बौद्धार्थापेक्षा । नच ज्ञानसामान्ये
विषयस्य कारणत्वात् शाब्दबोधादिसमये बाह्याया भुवोऽभावेन कथं शाब्दबोध इति
वाच्यम् । बौद्धार्थे सिद्ध एव ज्ञानसामान्ये विषयस्य कारणत्वं संभवति एवञ्च बौद्धार्थ-
साधनवेद्यायां सिद्धवत्तादृशकार्यकारणभावकथनस्यासंगतत्वात् । तस्माच्छाब्दबोधकाले
स्मरणकाले च विषयसमवधानस्यानपेक्षितत्वेन पूर्वोक्तरीत्या हिरण्यगर्भस्य शाब्दबोधस्संभ-
वत्येवेति न बौद्धार्थस्वीकरणीयः ॥ तस्माद्बौद्धार्थस्य विचारासहत्वात् न बौद्धयोः शब्दार्थ-
योस्तादात्म्यं वाच्यवाचकभावापरपर्यायशक्त्युपकारकमिति सिद्धम् ॥

शा. भा. ३२२ पृष्ठे

अपिच चिकीर्षितमर्थमनुतिष्ठन्तस्य वाचकं शब्दं पूर्वं स्मृत्वा पश्चात्तमर्थमनुतिष्ठतीति
सर्वेषां नः प्रत्यक्षमेतत् । तथा प्रजापतेरपि स्रष्टुः सृष्टेः पूर्वं वैदिकाश्शब्दा मनसि प्रादुर्बभूवुः ।
पश्चात्तदनुगतानर्थान्ससर्जति गम्यते । तथाच श्रुतिः “ स भूरिति व्याहरत्स भूमिमसृजत् ”
इति ॥

प्राचीनवैयाकरणास्तु—

यथा चक्षुरादीन्द्रियेषु घटादिचाक्षुषकारणत्वं अनादि, तथा घटादिपदे घटादिशाब्दबोधकारणत्वं अनादि वर्तते । सैव शक्तिः । बोधकत्वे अनादित्वञ्च, स्वप्रयोज्यशाब्दबोधसमानाकारपूर्वपूर्वबोधध्वंससमानकालीनत्वम् । बोधकत्वं शक्तिरित्यभिधानञ्च ज्ञायमानं पदं शाब्दकारणमिति मतेन । यदा तु पदज्ञानमेव बोधकारणमिति निष्कृष्टमतमाद्रियते । तदा बोधजनकज्ञानविषयत्वं शक्तिः । नच यत्र घटपदगजोभयविषयक-समूहालंबनस्मरणाद्वटशाब्दबोधो जातस्तत्र घटबोधकारणसमूहालम्बनज्ञानविषयत्वं गजेऽपि वर्तते इति गजस्यापि घटवाचकत्वापत्तिरिति वाच्यम् । बोधजनकतावच्छेदकविषयिता-कत्वस्य विवक्षितत्वात् । प्रकृते च समूहालम्बनस्य घटपदविषयकत्वेनैव घटशाब्दबोध-कारणत्वमिति बोधजनकतावच्छेदकविषयिता पदविषयितैवेति नातिप्रसङ्गः । तथाच निष्कृष्टमते बोधजनकतावच्छेदकविषयिताकत्वं शक्तिरिति सिद्धम् ।

ननु न अनादि बोधकारणत्वं शक्तिः । आधुनिकसंकेतितदेवदत्तादिपदे बोधकत्व-सत्त्वेऽपि अनादिबोधकत्वाभावात् । नच वस्तुतः अनादिभूतबोधकत्वस्य तत्राभावेऽपि न शाब्दबोधानुपपत्तिः । केवलबोधकत्वावच्छिन्नविषयकज्ञानत्वेन शक्तिज्ञानस्य शाब्द-बोधहेतुत्वात् तस्य चाक्षतत्वादिति वाच्यम् । देवदत्तादिपदं पित्रा व्यक्तिविशेषे संकेतितमिति संकेतज्ञानाभावे देवदत्तपदे व्यक्तिविशेषबोधकत्वज्ञानानुदयेन संकेत-ज्ञानमवस्थापेक्षणीयम् । तथाच “ तद्भेतोरेवास्तुहेतुत्वं मध्ये किं तेन ” इति न्यायात् संकेत-ज्ञानमेव शाब्दबोधहेतुः । न बोधकत्वज्ञानम् । तस्मादावश्यकत्वं संकेत एव शक्तिः । सच संकेतः आधुनिके नाम्नि पित्रादेः । गवादिपदे त्वीश्वरस्य । तथाच बोधकत्वं न शक्तिरिति चेन्न । किं संकेतः शाब्दबोधकारणम् उत संकेतज्ञानम् । द्वितीयेऽपि सामान्यतस्संकेतज्ञानं, ईश्वरसंकेतत्वेन ज्ञानं वा । नायः । घटपदे संकेतमजानतोऽपि वस्तुतस्संकेतस्य सत्त्वेन शाब्दबोधप्रसङ्गात् । न द्वितीयः । घटपदे संकेतमजानतः प्रमेयमिति ज्ञानवतोऽपि शाब्दबोधापत्तेः । प्रमेयत्वेन संकेतज्ञानस्याक्षतत्वात् । न तृतीयः । ईश्वरानङ्गीकर्तृणां मीमांसकादीनां ईश्वरसंकेतत्वेन संकेतज्ञानाभावेऽपि शाब्दबोधोदयेन व्यतिरेकव्यभिचारात् । नच अर्थबोधजनकतावच्छेदकत्वेन संकेत-ज्ञानं कारणम् इदं पदमेतदर्थबोधजनकतावच्छेदकवदित्याकारकं ज्ञानं मीमांसकादीनामपि संभवतीति न व्यभिचार इति वाच्यम् । ततोऽपि लाघवेन अर्थबोध-जनकतात्वावच्छिन्नविषयकज्ञानत्वेन कारणत्वसंभवात् । तथाच शाब्दबोधकारण-

ज्ञानविषयबोधकत्वमेव शक्तिः । नचाधुनिकसंकेतितदेवदत्तादिपदे बोधकत्वज्ञानाभावेऽपि संकेतज्ञानादेव शाब्दबोधोत्पत्त्या बोधकत्वज्ञानस्य हेतुत्वे व्यतिरेकव्यभिचार इति वाच्यम् । संकेतज्ञानस्यैव बोधकत्वज्ञानरूपत्वेन व्यभिचारानवकाशात् । ‘इदं पदमेतदर्थबोधकं भवतु’ इति संकेते बोधकत्वं विषयः । संकेतज्ञाने च संकेतविषयबोधकत्वमपि विषयः । इच्छादिज्ञानस्य इच्छाविषयविषयकत्वनियमात् । एवञ्च संकेतज्ञानमपि बोधकत्वज्ञानमेवेति न व्यभिचारः । नचेतराविशेषणतया बोधकत्वज्ञानमेव शाब्दबोधकारणम् । संकेतज्ञानञ्च संकेतविशेषणतयैव बोधकत्वमवगाहते इति न निरुक्तज्ञानमिति व्यभिचारो दुर्वार इति वाच्यम् । इतराविशेषणत्वेन बोधकत्वज्ञानस्य कारणत्वे मानाभावात् । नच घटपदं न घटधीजनकमिति ज्ञानं पदे बोधकत्वावगाहिज्ञानमेव प्रतिबध्नाति नतु अर्थे तत्पदजन्यपुरुषान्तरीयज्ञानविषयत्वावगाहि ज्ञानमपि । तथाच इतरविशेषणतयापि बोधकत्वज्ञानस्य शाब्दबोधकारणत्वे, घटपदं न घटधीजनकमिति जानतः घटपदजन्यमैत्रज्ञानविषयो घट इति ज्ञानाच्छाब्दबोधापत्तिरिति वाच्यम् । घटपदजन्यमैत्रज्ञानविषयो घट इति ज्ञानस्य घटपदे घटबोधकत्वाप्रकारकत्वेन शक्तिज्ञानरूपत्वाभावेन तेन शाब्दबोधापादनस्यासंभवात् । नच पदजन्यबोधविषयत्वस्यार्थे भाने तुल्यवित्तिवेद्यतया पदे अर्थबोधकत्वं भासत इति निरुक्तज्ञानस्य शक्तिज्ञानत्वं संभवत्येवेति वाच्यम् । नेदं पदं तद्धीजनकमिति बाधज्ञानस्य जागरूकत्वेन पूर्वोक्तज्ञानस्य पदे बोधकत्वावगाहित्वासंभवात् । नच पदे बोधकत्वज्ञानादिव अर्थे पदबोध्यत्वज्ञानादपि शाब्दबोधोदयेन, बोधकत्वमिव अर्थनिष्ठं बोध्यत्वमपि शक्तिः । एवञ्च घटपदजन्यमैत्रज्ञानविषयो घट इति ज्ञानं बोध्यत्वरूपशक्तिविषयकमिति तेन शाब्दबोध आपादयितुं शक्यत एवेति वाच्यम् । तथासति नेदं तद्धीजनकमिति बाधग्रहोपन्यासस्य व्यर्थत्वात् । शक्तिज्ञानप्रतिबन्धकज्ञानसद्भावेन न शाब्दबोधः वस्तुतः संभवतीति बोधनायैव तादृशज्ञानमुपन्यस्तम् । यदि अर्थे बोध्यत्वमपि शक्तिस्तदा बोध्यत्वरूपशक्तिज्ञानं प्रति पदे बोधकत्वाभाववगाहिज्ञानस्य ग्राह्याभावानवगाहित्वेनाप्रतिबन्धकत्वात्तदुपन्यासोऽनर्थकः । यद्विच ग्राह्याभावानवगाह्यपि बोधकत्वाभावज्ञानं बोध्यत्वबोधकत्वोभयविधशक्तिज्ञानं प्रतिबध्नातीति तदुपन्यासोऽर्थवानित्युच्यते । तदा तादृशबाधज्ञानदशायां घटपदजन्यमैत्रज्ञानविषयो घट इति ज्ञानस्यासंभवेन तेनापत्तेरसंभवात् न कोऽपि दोषः ॥

नच गङ्गापदे तीरबोधकत्वसत्त्वाद्गङ्गापदस्य तीरे लक्षणाया उच्छेदप्रसङ्ग इति वाच्यम् । व्यवहारेण शक्तिर्गृह्यते । सच व्यवहारः लक्ष्यार्थेऽपि वर्तते इति लक्षणो-

च्छेदस्येष्टत्वात् । अपिच चक्षुरादिनोपस्थितघटादेशशाब्दबोधाभावेन तद्विषयक-
 शाब्दबोधे शक्त्यापदजन्यतदुपस्थितिः कारणमिति वाच्यम् । लक्षणाया अङ्गीकारे,
 तद्विषयकशाब्दबोधे, शक्त्यापदजन्यतदुपस्थितिः (१) लक्षणाया पदजन्यतदुपस्थि-
 तिश्च (२) कारणमिति कार्यकारणभावद्वयकल्पनेन गौरवम् । एवम् लक्षणा-
 जन्योपस्थितेरभावेऽपि शक्तिजन्योपस्थित्या शाब्दबोधजननेन प्रसक्तव्यतिरेकव्यभिचार-
 वारणाय, अव्यवहितोत्तरत्वसंबन्धेन तत्तदुपस्थितिविशिष्टशाब्दबोधं प्रति तत्तदुपस्थितिः
 कारणमिति अनन्तकार्यकारणभावकल्पनया गौरवम् । एवम् पदार्थोपस्थितिं प्रति
 शक्तिज्ञानस्य, लक्षणाज्ञानस्य च कारणत्वं कल्पनीयमिति गौरवम् । नच शाब्द-
 बोधे वृत्तिज्ञानजन्योपस्थितिः कारणम् पदार्थोपस्थितौ च वृत्तिज्ञानं कारणम् इति
 एकैक एव कार्यकारणभावः । वृत्तित्वञ्च शक्तिरूपोभयानुगतमिति वाच्यम् ।
 वृत्तित्वं हि (१) शक्तिभिन्नः लक्षणाभिन्नश्च यः तद्विन्नत्वपर्यवसितं शक्तिरूपान्य-
 तरत्वम् (२) शाब्दबोधहेतुपदार्थोपस्थित्यनुकूलसंबन्धत्वं वा । उभयमपि शक्तित्वा-
 पेक्षया गुर्विति तद्वदितस्य कारणतावच्छेदकत्वं न संभवति । किञ्च शाब्दबोधहेतु-
 पदार्थोपस्थित्यनुकूलसंबन्धत्वं न वृत्तित्वम् । अन्योन्याश्रयात् । निरुक्तवृत्तित्वं
 उपस्थितिनिष्ठशाब्दबोधहेतुत्वघटितम् । हेतुत्वज्ञाने हेतुतावच्छेदकज्ञानं कारणम् ।
 अवच्छेदज्ञाने अवच्छेदकज्ञानस्य कारणत्वात् । उपस्थितिनिष्ठकारणतावच्छेदकञ्च
 वृत्तिज्ञानजन्योपस्थितित्वं वृत्तित्वघटितम् । तथाच वृत्तित्वज्ञाने, शाब्दबोधपदार्थो-
 पस्थित्योः कार्यकारणभावज्ञानम् । कार्यकारणभावज्ञाने च कारणत्वघटितवृत्तित्व-
 ज्ञानमित्यन्योन्याश्रयः । तस्मान्न शाब्दबोधहेतुत्वघटितं वृत्तित्वम् । नच लक्ष-
 णायाः शक्यसंबन्धरूपत्वेन शक्तिघटितत्वाल्लक्षणाजन्योपस्थितिरपि शक्तिप्रयोज्येति
 लक्ष्यार्थोपस्थितिसाधारणेन शक्तिप्रयोज्योपस्थितित्वेन एकैव कार्यकारणभाव इति
 न गौरवमिति वाच्यम् । प्रयोज्यत्वस्य जन्यजन्यत्वरूपत्वे घटपदजन्यशाब्दबोधे
 भूतलस्य भानापत्तिः । घटपदशक्यवद्भूतलमित्युपस्थितौ घटपदशक्तिज्ञानं विशेषण-
 तावच्छेदकप्रकारकज्ञानविधया कारणम् । तथाच पूर्वोक्तोपस्थितेः शक्तिज्ञानप्रयो-
 ज्यत्वात् तादृशोपस्थितिवलेन भूतलस्यापि शाब्दबोधापत्तिः । प्रयोज्यत्वस्य जन्यत्व-
 रूपत्वे, लक्षणाजन्यतीरोपस्थितेः शक्तिज्ञानजन्यत्वाभावेन न लक्ष्यार्थोपस्थितिसाधा-
 रण एकः कार्यकारणभावः । तस्माल्लक्षणाया अङ्गीकारे अधिककार्यकारण-
 भावकलनागौरवम् दुर्वारमेव ॥

एवञ्च गङ्गापदस्यापि तीरबोधकत्वात्तीरं शक्तिरेव । यथा हर्यादिपदप्रयोगे,

किमत्र विष्णुरभिप्रेतः उत सूर्यः इत्यर्थसन्देहः प्रकरणादिना तात्पर्यज्ञाने तु अर्थविशेष-
विषयकशब्दबोधः । तथा गङ्गापदे नानार्थबोधकत्वं जानतः पुरुषस्य भवत्येवार्थ-
सन्देहः अन्वयानुपपत्त्यादिना तीरतात्पर्यकत्वनिश्चये तीरविषयकशब्दबोधो जायते ।
अत एव “ प्रायः सर्वे सर्वार्थाः ” इति वैयाकरणप्रवादः संगच्छते । तथाच बोधकत्व-
मेव शक्तिरिति वदन्ति ॥

तदपि न समञ्जसम्

बोधकत्वज्ञानस्य संकेतग्रहाधीनत्वेन अवश्यापेक्षितज्ञानविषयसंकेतस्यैव
शक्तित्वसंभवात् । नच संकेतो न स्वरूपतश्शब्दबोधहेतुः नापि सामान्यतो
ज्ञातः अपितु ईश्वरसंकेतत्वेन ज्ञातः हेतुरिति वाच्यम् तथाच ईश्वरानङ्गीकर्तृणां
शब्दबोधो न स्यादित्युक्तमेवेति वाच्यम् । ईश्वरसंकेतः शक्तिः । आधुनिकसंकेतः
परिभाषा । शक्तिज्ञानस्य परिभाषाज्ञानसाधारणसंकेतज्ञानत्वेनैव कारणत्वम् ।
अन्यथा कार्यकारणभावद्वयकल्पनापत्तेः । एवञ्च वस्तुतः ईश्वरसंकेतस्यैव शक्तित्वेऽपि
ईश्वरसंकेतत्वेन ज्ञानमनपेक्षितमिति पूर्वोक्तदोषानवकाशात् ।

(१) किञ्च आधुनिकसंकेतस्थले बोधकत्वज्ञानाभावेऽपि संकेतज्ञानादेव शब्द-
बोधोत्पत्त्या व्यभिचारेण बोधकत्वज्ञानस्य कारणत्वासंभवान्न बोधकत्वं शक्तिः । नच
संकेतविषयबोधकत्वविषयकत्वासंकेतज्ञानमेव बोधकत्वज्ञानमिति न व्यभिचार इति
वाच्यम् । देवदत्तपदं व्यक्तिविशेषं बोधयत्विति संकेतः । संकेतज्ञाने च संकेतो
विशेष्यः । तत्र पदविशेष्यकत्वं व्यक्तिविशेषबोधजनकत्वप्रकारकत्वञ्चेत्युभयं प्रकारः ।
नतु पदे बोधजनकत्वं प्रकारः । तस्मात्संकेतज्ञानं न पदे बोधकत्वावगाहीति पूवात्करीत्या
व्यभिचारः । यदज्ञानं यद्विशेष्यकं यत्प्रकारकञ्च तदज्ञानज्ञानं तदज्ञानविषयविषयक्रमपि
न तस्मिन्विशेष्ये तत्प्रकारावगाहि । अतएव शब्दचिन्तामणौ पदार्थसंसर्गरूपवाक्यार्थ-
ज्ञानं अनुमितिरेवेति वैशेषिकमतव्युत्पादनावसरे “ एतानि पदानि स्मारितार्थसंसर्गज्ञानपूर्व-
काणि ” इत्यनुमानाकारं प्रदर्श्य “ एते पदार्थाः मिथः संसृष्टाः ” इति पदार्थपक्षकानुमाना-
न्तरं प्रदर्शितम् । तत्र प्रथमानुमानं पदे संसर्गज्ञानपूर्वकत्वमवगाहमानमपि एकपदार्थे
अपरपदार्थसंसर्गं नावगाहत इति एकपदार्थे अपरपदार्थसंसर्गविषयकमनुमानान्तरमुक्तमिति
व्याख्यातारः द्वितीयानुमानमवतारयन्ति । तथाच आधुनिकसंकेतस्थले बोधकत्वज्ञानस्य
व्यभिचारान्न बोधकत्वं शक्तिः ॥

(२) अपिच न घटबोधजनकत्वं घटवाचकत्वम् । घटविषयकमहावाक्यार्थ-
बोधजनकघटमानयेतिवाक्यघटकानयपदस्यापि घटवाचकत्वापत्तेः । घटकर्मकानयनविष-
यकमहाशाब्दबोधे घटमानयेतिवाक्यं कारणम् । वाक्यञ्च पदसमूहः । समूहश्च प्रत्येकान-
तिरिक्तः । तथाच घटविषयकशाब्दबोधजनकत्वं समुदायघटकानयपदेऽपि वर्तते ।
अतः घटविषयकत्वावच्छिन्नशाब्दबोधनिष्ठजन्यतानिरूपितजनकत्वं शक्तिः । यद्यपि
घटविषयकः महाशाब्दबोधः आनयपदजन्यः, तथापि शाब्दबोधनिष्ठाजन्यता आनयपद-
निरूपिता न घटविषयकत्वावच्छिन्ना । अपितु आनयनविषयकत्वावच्छिन्ना । घट-
विषयकत्वावच्छिन्नजन्यतानिरूपितजनकत्वन्तु घटपद एव वर्तते इति नातिप्रसङ्ग इति
वाच्यम् । तच्च न संभवति । कलशपदाद्वटपदात् कुम्भपदाच्च घटविषयकशाब्द-
बोधो जायते । एवञ्च कुम्भपदाभावेऽपि घटपदाच्छाब्दबोधो जायत इति व्यतिरेक-
व्यभिचारवारणाय, अव्यवहितोत्तरत्वसंयन्त्रेण घटपदविशिष्टशाब्दबोधे घटपदं कारणम्
तेन संयन्त्रेण कलशपदविशिष्टशाब्दबोधे कलशपदं कारणमिति विशिष्यकार्यकारणभावो
वाच्यः । तत्र च अव्यवहितोत्तरत्वनिवेशादेव व्यभिचारस्य वारणसंभवात् कार्यताव-
च्छेदककोटौ विषयविषयकत्वस्य निवेशे प्रयोजनं नास्ति । तथाच घटविषयकत्वावच्छिन्न-
शाब्दबोधनिष्ठजन्यता अप्रसिद्धा । जन्यतायां घटादिविषयकत्वावच्छिन्नत्वावगाहि
शक्तिज्ञानं भ्रम एव । एवञ्च सर्वत्र जन्यतायां तत्तद्विषयकत्वावच्छिन्नत्वावगाहिशक्तिभ्रमा-
च्छाब्दबोधकल्पनमसमञ्जसम् । तस्मान्न बोधकत्वं शक्तिः ॥

(३) किञ्च यदि बोधकत्वं शक्तिः तदा घटपदं चैत्रस्य घटवाचकमिति
व्यवहारस्स्यात् । वाचकमित्यस्य बोधकमित्यर्थः । चैत्रस्येतिषष्ठ्यन्तार्थः चैत्रनिष्ठत्वम् । तच्च
वाचकशब्दार्थैकदेशे बोधे अन्वेति । तथाच चैत्रनिष्ठघटविषयकबोधजनकं घटपदमिति
बोधः । घटपदेन चैत्रस्य घटबोधो जात एवेति वाक्यार्थोऽवाधित इति तद्व्यवहारस्य
प्रामाणिकत्वं स्यात् । नच बोधकत्वेन ईश्वरेच्छा शक्तिरिति पक्षेऽपि घटपदं
चैत्रस्य घटवाचकमिति व्यवहारापत्तिः । तत्पक्षे बोधजनकत्वप्रकारकेश्वरेच्छाविशेष्यत्वं
वाचकत्वम् । चैत्रस्येति षष्ठ्यन्तार्थः चैत्रनिष्ठत्वम् वाचकत्वपदार्थैकदेशे बोधे अन्वेति ।
चैत्रनिष्ठघटविषयकबोधजनकत्वप्रकारकेश्वरेच्छाविशेष्यभूतम् घटपदं इति बोधः ।
बोधविषयश्च वाक्यार्थः अवाधितः । ईश्वरेच्छा विद्यमानसर्ववस्तुविषयिणी ।
घटपदचैत्रस्य बोधो जायत इति घटपदं चैत्रस्य घटं बोधयत्वित्याकारिकापि सा
कल्प्यते ।

एवञ्च चैत्रनिष्ठघटबोधजनकत्वप्रकारकभगवदिच्छाविषयत्वं घटपदे वर्तते । वाक्यार्थस्याबाधितत्वेन घटपदं चैत्रस्य घटवाचकमिति प्रामाणिकव्यवहारापत्तिरिति वाच्यम् । गङ्गापदे तीरवाचकत्वव्यवहारवारणवदस्यापि व्यवहारस्यवारणसंभवात् । तथाहि गङ्गापदात्तीरबोधो भवतीति गङ्गापदं तीरबोधकम् । तादृशबोधकत्वमपि विद्यमानसर्वविषयकेश्वरेच्छाविषयः । गङ्गापदं तीरवाचकमिति प्रामाणिकव्यवहारो नास्ति । ईश्वरेच्छा च नास्माकं प्रत्यक्षसिद्धा । तस्मात्प्रौक्तिकव्यवहाराविरोधेन सर्वविषयकत्वं कल्पनीयम् । वाचकमित्यत्र वचधात्वर्थः भगवदिच्छानिरूपितबोधजनकतात्वावच्छिन्नप्रकारतानिरूपितविशेष्यता कर्तृप्रत्ययार्थः आश्रयः । एवञ्च गङ्गापदं तीरवाचकं इति वाक्यात् तीरबोधजनकतात्वावच्छिन्नप्रकारतानिरूपितभगवदिच्छीयविशेष्यताश्रयीभूतं गङ्गापदमिति बोधो भवेत् । तत्र च वाक्यार्थः बाधितः । ईश्वरेच्छा च तीरबोधो भवतु बोधजनकं गङ्गापदं भवत्वित्याकारिका । तावतापि तस्यास्सर्वविषयकत्वनिर्वाहात् । यद्यपि पदे तीरबोधजनकत्वं प्रकारः । तथापि न तीरबोधजनकतात्वेन प्रकारः, अपितु बोधजनकतात्वेन । तथा च तीरबोधजनकतात्वावच्छिन्नप्रकारतानिरूपितभगवदिच्छाविशेष्यत्वं गङ्गापदे बाधितमिति न तादृशो व्यवहारः प्रामाणिकः । एवमेव घटपदं चैत्रस्य घटवाचकमिति व्यवहारोऽपि न प्रामाणिकस्संभवति । वचधात्वर्थैकदेशबोधे षष्ठ्यन्तार्थचैत्रनिष्ठत्वान्वये निरुक्तवाक्यात् चैत्रनिष्ठघटविषयकबोधजनकतात्वावच्छिन्नप्रकारतानिरूपितभगवदिच्छीयविशेष्यताश्रयीभूतं घटपदम् इति बोधो जायते । तद्विषयश्च बाधितः । ईश्वरेच्छा चैत्रस्य घटबोधो भवतु घटपदञ्च घटबोधकं भवत्वित्याकारिका कल्प्यते । तावतैव तस्या विद्यमानसर्वविषयकत्वनिर्वाहात् । तस्याञ्च यद्यपि घटपदे चैत्रीयघटबोधजनकत्वं प्रकारः । तथापि घटबोधजनकतात्वेनैव प्रकारः । नतु चैत्रनिष्ठघटबोधजनकतात्वेन । तथाच चैत्रनिष्ठघटविषयकबोधजनकतात्वावच्छिन्नप्रकारतानिरूपितभगवदिच्छीयविशेष्यताश्रयत्वं घटपदे बाधितमिति न घटपदं चैत्रस्य घटवाचकमिति प्रामाणिकव्यवहारापत्तिः । तस्माद्बोधकत्वस्य शक्तिस्वरूपत्वे घटादिपदानां पुरुषविशेषान्तर्भावेण वाचकत्वव्यवहारापत्तेः न बोधकत्वं शक्तिः ॥

(४) अपिच प्रयोज्यप्रयोजकवृद्धव्यवहारं दृष्ट्वा, शब्दस्य बोधकारणत्वमवगत्य, असंवद्धस्य कारणत्वानुपपत्त्या पदे अर्थसंबन्धं कल्पयति व्युत्पित्सुबालः । पदे बोधकारणत्वमनुपपन्नमिति ज्ञानदशायां पदे बोधजनकत्व(शक्ति)ज्ञानं न संभवति । तस्मात्पदपदार्थयोः न बोधकत्वं संबन्धः ॥

(५) अपिच वृत्तिज्ञानं शाब्दबोधे कारणमिति सर्वसंप्रतिपन्नम् । शक्तिज्ञानस्य बोधकारणत्वे विषयितासंबन्धेन शक्तिरवच्छेदिका । यदि बोधकत्वं शक्तिः तदा बोधकारणतायां बोधकारणत्वमवच्छेदकम् । तथा चात्माश्रयः । अवच्छेद्यज्ञाने अवच्छेदकज्ञानं कारणम् । प्रकृते च अवच्छेद्यं अवच्छेदकञ्च बोधकारणत्वमिति स्वज्ञाने स्वज्ञानापेक्षयात् । तस्मादपि बोधकत्वं न शक्तिः ॥

(६) नानार्थकस्थल इव घटादिपदप्रयोगेऽपि तात्पर्यज्ञानादेवार्थविशेषविषयकश्शाब्दबोधः इति सर्वत्र तात्पर्यज्ञानकल्पने गौरवमपि ॥

(७) किञ्च शक्यार्थः, लक्ष्यार्थ इत्यसंकीर्णो व्यवहारस्सर्वतान्त्रिकाणाम् । तादृशव्यवहारान्यथानुपपत्त्या च लक्ष्यार्थव्यावृत्तैव शक्तिर्वाच्या । एवञ्च गङ्गापदातीरोपस्थितये लक्षणावृत्तिरप्यङ्गीकरणीया । अन्यथा तीरबोधकत्वस्य गङ्गापदे सत्त्वात् गङ्गापदं तीरवाचकमिति प्रामाणिकव्यवहरापत्तिः ॥

यदपि लक्षणाङ्गीकारे, शाब्दबोधे शक्तिज्ञानजन्योपस्थितित्वेनेव लक्षणाजन्योपस्थितित्वेनापि कार्यकारणभावकल्पनेन परस्परं व्यभिचारवारणाय कार्यतावच्छेदककोटौ अव्यवहितोत्तरत्वनिवेशेन अनन्तकार्यकारणभावप्रसङ्गेन च गौरवमिति ॥

तदपि न । पदनिष्ठस्य बोधकत्वस्य शक्तिरूपत्वसंभव एव, लक्षणाप्रयुक्तकार्यकारणभावादिकल्पने लाघवम् । लक्षणाङ्गीकारे च अधिककार्यकारणभावकल्पने गौरवमिति विचारस्यावसरः । बोधकत्वञ्च न शक्तिरिति व्यवस्थापितम् । एवञ्च लक्षणावृत्तिरङ्गीकरणीयतया कार्यकारणभावादिकल्पनागौरवस्य फलमुखत्वेनादोषत्वात् । अन्यथा शाब्दबोधाख्यप्रमित्यन्तरकल्पने तद्ध्वंसतत्प्रागभावादिकल्पने पदार्थोपस्थित्यादीनाञ्च शाब्दबोधकारणत्वकल्पने च गौरवात् शाब्दबोधाख्यविलक्षणप्रमितिरेव न सिद्धयेत् । वस्तुतः लक्षणाया अङ्गीकारेऽपि न कार्यकारणभावान्तरकल्पनागौरवम् । लक्ष्योपस्थितिसाधारणेन शक्तिप्रयोज्योपस्थितित्वेन शाब्दबोधकारणत्वाङ्गीकारात् । नच प्रयोज्यत्वं जन्यत्वं जन्यजन्यत्वं वा न संभवतीति वाच्यम् । अन्यथासिद्धिनिरूपकतानवच्छेदकशक्तिज्ञानोत्तरवृत्तितावच्छेदकधर्मवत्त्वरूपशक्तिज्ञानप्रयोज्यत्वस्य जन्यजन्यजन्योभयसाधारणस्य सुवचत्वात् । एवञ्च शक्तिप्रयोज्योपस्थितित्वेन शक्यलक्ष्योपस्थित्योस्संभ्रह्मसंभवति । एवम् वृत्तिज्ञानजन्योपस्थितित्वेन शाब्दबोधकारणत्वाङ्गीकारान्नाधिककार्यकारणभावः कल्प्यते । नच शाब्दबोधहेतुपदार्थोपस्थित्यनुकूलसंबन्धत्वं न वृत्ति-

त्वं अन्योन्याश्रयादित्युक्तमिति वाच्यम् । विजातीयपदार्थोपस्थित्यनुकूलसंबन्धत्वं वृत्तित्वम् । पदार्थोपस्थितौ वैजात्यपरिचयायैव शाब्दबोधहेतुत्वमुपस्थितावुक्तम् । नतु शाब्दबोधहेतुत्वस्यापि लक्षणे प्रवेशः । उपस्थितौ वैजात्यानिवेशे घटपदाकाशयोस्समवायस्य संबन्धस्य वृत्तित्वापत्तिः । घटपदस्य समवायेन आकाशाश्रितत्वात्तयोः संबन्धज्ञाने सति घटपदश्रवणे आकाशस्योपस्थितिर्जायते । आकाशोपस्थित्यनुकूलसंबन्धत्वं समवाये वर्तते । द्वारणाय उपस्थितौ वैजात्यमुक्तम् । घटपदादुपस्थिताकाशस्य शाब्दबोधे भानाभावात् आकाशोपस्थितिर्न विजातीयेति नातिव्याप्तिः । एवञ्च वृत्तित्वस्य उपस्थितिनिष्ठशाब्दबोधहेतुत्वाघटितत्वान्न पूर्वोक्तान्योन्याश्रयः । नच तथापि शक्तित्वापेक्षया वृत्तित्वं गुर्विति तद्वटितवृत्तिज्ञानजन्योपस्थितित्वेन न कारणत्वमिति वाच्यम् । शाब्दबोधहेतुपदार्थोपस्थित्यनुकूलसंबन्धत्वरूपवृत्तित्वस्य बोधजनकत्वरूपशक्तित्वापेक्षया गुरुत्वेऽपि शाब्दबोधहेतुत्वाघटितविजातीयपदार्थोपस्थित्यनुकूलसंबन्धत्वस्यागुरुत्वात् ॥

अपिच शक्यसंबन्धो लक्षणा । साच नास्तीति न वक्तुं शक्यते । गङ्गापदशक्यप्रवाहसंबन्धस्य तीरे सत्त्वात् । तदज्ञानान्न लक्ष्यार्थोपस्थितिरित्यपि न वक्तुं शक्यम् । येन गङ्गापदस्य तीरस्य च शक्यसंबन्धरूपसंबन्धो गृहीतः तस्य एकसंबन्धिनः पदस्य ज्ञानेन अपरसंबन्धिनः तीरस्य स्मरणं भवत्येवेत्यनुभवसिद्धत्वात् । नापि लक्षणाज्ञानस्य लक्षणाजन्योपस्थितेर्वा शाब्दबोधहेतुत्वं नास्तीति युक्तम् । यत्र गङ्गापदाच्छक्यसंबन्धग्रहादेव तीरमुपस्थितम् । नतु प्रवाहोपस्थित्यनन्तरमुपस्थितम् । तत्र तीरविषयकशाब्दबोधः सर्वानुभवसिद्ध इति शक्यसंबन्धज्ञानस्य तज्जन्योपस्थितेश्च शाब्दबोधकारणत्वस्य कृतत्वात् । नच तत्र गङ्गापदं तीरं बोधयतु इत्याकारकतात्पर्यस्य ज्ञानं वर्तते । तच्च गङ्गापदे तीरबोधकत्वमवगाहते । बोधकत्वमेव शक्तिः । तस्मात्तात्पर्यज्ञानं शक्तिज्ञानरूपम् । तत एवच शाब्दबोध इति लक्षणाज्ञानस्य तज्जन्योपस्थितेर्वा शाब्दबोधकारणत्वं नाङ्गीक्रियते इति वाच्यम् । तात्पर्यं नाम वक्तुरिच्छा । तस्यां यद्यपि पदं विशेष्यः बोधकत्वं प्रकारः । तथापि तस्या ज्ञाने न बोधकत्वं प्रकारः । नापि पदं विशेष्यः । किन्तु इच्छा विशेष्यः । पदविशेष्यकत्वं बोधकत्वप्रकारकत्वञ्चेत्युभयं प्रकारः । तथा च तात्पर्यज्ञानस्य पदे बोधकत्वावगाहित्वाभावात् न शक्तिज्ञानरूपत्वमिति लक्षणाज्ञानस्य कारणत्वं कृतमेव ।

अपिच पदपदार्थयोः शक्त्याख्यसंबन्धज्ञाने सति पदश्रवणेनार्थस्मरणं जायते । एवञ्च पदस्य येनयेन सह वृत्तिः (संबन्धः) गृहीता तेषां सर्वेषामुपस्थितिर्जायते । तेषु च यस्य बोधे वक्तृतात्पर्यं ज्ञायते तस्य शाब्दबोधो भवति । तस्मात्तात्पर्यज्ञानोत्पत्तेः

पूर्वं पदार्थोपस्थितिरपेक्षिता । पदात्पदार्थोपस्थितये च वृत्तिज्ञानमपेक्ष्यते । स्पष्टश्चेदमभिहितम् तात्पर्यस्य वृत्तित्वं परिहरद्भिः भट्टाचार्यैः शक्तिवादे सामान्यकाण्डे ।

एवञ्च तात्पर्यज्ञानात्पूर्वमेव वृत्तिज्ञानजन्यपदार्थोपस्थितेरपेक्षितत्वात्तात्पर्यज्ञानस्य शक्तिज्ञानत्वकथनं न समञ्जसम् ।

एतेन यत्र शक्यसंबन्धादेव तीरमुपस्थितं तत्रापि बोधकत्वज्ञानंकल्प्यते । तदनन्तरमेवशाब्दबोधः । नचज्ञानव्यक्त्यन्तरकल्पनया गौरवं, फलमुखत्वेनादोषात् । वस्तुतस्तु सुषुप्त्यपगमक्षणमारभ्य पुनस्तदुत्पत्तिक्षणपर्यन्तं प्रत्यक्षात्मविशेषगुणोत्पाद आवश्यकः । अतएव सुषुप्तिभिन्नः प्रत्यक्षात्मविशेषगुणशून्यः कालः मूर्च्छेत्युच्यते । तथाच तावत्कालमन्तरा ज्ञानाद्यावश्यकतया ज्ञानान्तरमपेक्ष्य बोधकत्वज्ञानमेव कल्प्यते इति गौरवस्यैवाभावादित्यपि समाहितम् । शक्तिज्ञानस्य पदार्थोपस्थितावेवोपयोगेन तस्याश्च शक्यसंबन्धग्रहादेव जातत्वेन, तात्पर्यज्ञानानन्तरं बोधकत्वज्ञानस्योपयोगाभावेन तत्कल्पनस्यासंगतत्वात् । तथाच शक्यसंबन्धज्ञानस्य तज्जन्योपस्थितेश्च शाब्दबोधकारणत्वमुभयवादिप्रतिपन्नमेवेति न लक्षणाया अकल्पनप्रयुक्तं लाघवमपि । तस्माद्बोधकत्वं शक्तिरिति मतं न समञ्जसमिति सिद्धम् ॥

नैयायिकास्तु, आधुनिकसंकेतस्थले संकेतज्ञानादेव शाब्दबोधस्य सर्वानुभवसिद्धत्वेन आवश्यकत्वात्संकेत एव शक्तिः । आधुनिकसंकेतः परिभाषा । नित्यः ईश्वरसंकेतः शक्तिः । ईश्वरेच्छा च घटः घटपदजन्यबोधविषयो भवत्वित्याकारिका । विशेष्यतासंबन्धेन तत्पदजन्यबोधविषयत्वप्रकारकभगवदिच्छावत्वं तत्पदवाच्यत्वम् । नच विद्यमानसर्वविषयिण्यामीश्वरेच्छायां पटोऽपि विशेष्यः तथाच घटपदबोद्धव्यत्वप्रकारकभगवदिच्छाविशेष्यत्वं पटस्यापीति पटस्य घटपदवाच्यत्वं स्यादिति वाच्यम् । पटादिविषयिण्यपीश्वरेच्छा न पटे घटपदजन्यबोधविषयत्वं अवगाहते । तथा सति तस्या विसंवादित्वप्रसङ्गात् । अपितु घट एव घटपदबोद्धव्यत्वमवगाहते । तत्पदजन्यबोधविषयत्वप्रकारतानिरूपितभगवदिच्छाविशेष्यत्वमेव तत्पदशक्यत्वम् । ईश्वरेच्छीयपटनिष्ठविशेष्यतायां न घटपदबोद्धव्यत्वप्रकारतानिरूपितत्वमिति न पटस्य घटपदवाच्यत्वम् । नच गङ्गायां घोष

१. श-वा-१३ पृष्ठे. यतः पदार्थोपस्थितिच्यापारकः संकेतो वृत्तिः । तात्पर्यज्ञानञ्च साक्षादेव शाब्दबोधोपयोगि । ननु पदार्थोपस्थितिद्वारा । वृत्त्युपस्थापितपदार्थ एव प्रकरणादिना वक्तृतात्पर्यावधारणात् ।

इत्यादौ गङ्गापदेन तीरबोधात् सर्वविषयिणीश्वरेच्छा तीरऽपि गङ्गापदजन्यबोधविषयत्वमवगाहते इति वक्तव्यम् तथाच गङ्गापदजन्यबोधविषयत्वप्रकारतानिरूपितभगवदिच्छाविशेष्यत्वस्य तीरे सत्त्वात्तीरस्यापि गङ्गापदवाच्यत्वापत्त्या लक्षणोच्छेदप्रसङ्ग इति वाच्यम् ।

तत्पदजन्यबोधविषयतात्वावच्छिन्नप्रकारतानिरूपितभगवदिच्छाविशेष्यत्वमेव तत्पदशक्यत्वम् । अस्माकमप्रत्यक्षाया ईश्वरेच्छायाः लोकव्यवहारविरोधेनाकारः कल्पनीयः । तीरं गङ्गापदवाच्यमिति व्यवहारो नास्ति । अतः विषयता गङ्गापदजन्यबोधीया भवतु विषयतावत्तीरं भवतु इत्याकारः कल्प्यते । तस्याश्च तीरे गङ्गापदजन्यबोधविषयत्वं विषयतात्वेनैव प्रकारः नतु तादृशविषयतात्वेन । तथाच गङ्गापदजन्यबोधविषयतात्वावच्छिन्नप्रकारतानिरूपितविशेष्यत्वस्य तीरे अभावान्न तीरस्य गङ्गापदवाच्यत्वापत्तिरिति न लक्षणोच्छेदप्रसङ्गः । नच ईश्वरकर्तृकवेदे आयुर्धृतमिति श्रूयते । तत्र आयुःपदादायुर्जनकस्य बोधो भवति । तस्मात्कर्तुरीश्वरस्य “आयुः पदमिदं आयुर्जनकं बोधयतु” इत्याकारिका “आयुर्जनकः एतदायुःपदजन्यबोधविषयो भवतु” इत्याकारिका वा बुबोधयिषा वाच्या । तस्याश्च आयुर्जनकांशे आयुःपदजन्यबोधविषयतात्वेन तादृशविषयत्वं प्रकार इति आयुःपदजन्यबोधविषयतात्वावच्छिन्नप्रकारतानिरूपितविशेष्यत्वस्य आयुर्जनके सत्त्वाद्वेदस्थले आयुर्जनकस्य आयुःपदवाच्यत्वापत्तिरिति वाच्यम् । एतदनुरोधेन इदन्त्वानवच्छिन्नपदविषयताघटितनिरुक्तविषयतात्वावच्छिन्नप्रकारतानिरूपितविशेष्यताया एव पदशक्यत्वरूपत्वम् स्वीक्रियते ।

घटः घटपदजन्यबोधविषयो भवत्वित्येच्छायां घटपदं इदन्त्वेन न भासत इति इदन्त्वानवच्छिन्नपदविषयताघटितनिरुक्तविषयतात्वावच्छिन्नप्रकारतामादाय घटादेः घटादिपदवाच्यत्वम् । वेदे सर्वत्र आयुःपदादायुर्जनकाबोधात् आयुःपदमिदं आयुर्जनकं बोधयतु इत्याकारिका बुबोधयिषा । एवञ्च तदीयायुःपदविषयता इदन्त्वावच्छिन्नमिति इदन्त्वानवच्छिन्नपदविषयताघटितनिरुक्तविशेष्यत्वस्य आयुर्जनके अभावान्नायुर्जनकस्य वैदिकायुःपदवाच्यत्वापत्तिः । अत्र च पक्षे परैरुद्भाविता दोषाः प्राच्यनव्यवैयाकरणमतविमर्शवसरे परिहृताः । एवञ्च ईश्वरसंकेत एव शक्तिरिति व्यवस्थापयन्ति ॥

इति शक्तिविमर्शः

University Notes

OUR VICE-CHANCELLOR

The Government has been pleased to confer the title of Dewan Bahadur on our Vice-Chancellor Rao Bahadur S. E. Runganadhan, M.A., for the distinguished services he has rendered to the cause of higher education in this presidency. While felicitating him on this honour the staff of the University and all those who know him are unanimous in wishing for him more and greater honours.

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CONVOCATION

The fourth Convocation of the University was held on Tuesday, the 30th October, 1934, presided over by His Excellency, the Governor of Madras, the Chancellor of the University. The Address to the graduates was delivered by Dewan Bahadur R. V. Krishna Ayyar, Avergal, B.A., M.L., Secretary, Legislative Council, Madras. On the conclusion of the Address, the Vice-Chancellor delivered a brief speech reviewing the progress and working of the University ever since its inception.

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CONFERENCES

The following members of the staff attended as delegates of the University and read papers at the Conferences noted against each :—

Dr. S. N. Chakravarti	The Indian Science Congress at Calcutta, January, 1935.
Mr. T. S. Raghavan	The Indian Science Congress at Calcutta, January, 1935.
Dr. B. V. Narayanaswami Naidu	The Indian Economic Conference at Patna December, 1934.
Mr. R. Ramanujachariar and	The Indian Philosophical Conference at Waltair.
Mr. C. T. Srinivasan	

Mr. T. S. Sabhesa Ayyar, Lecturer in Music, presided over the Music Conference held at Madras in the third week of December, '34.

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SPECIAL LECTURES

The following Special Lectures were delivered since the last issue :—

Mr. T. N. S. Raghavan	Bacteria in Daily Life. Insects and human life.
Mr. V. R. Ramachandra Dikshitar	War in Ancient India (5 Lectures).
Prof. Norman Brown of Philadelphia University	Early Western Indian Miniature Painting.

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BUILDINGS

The construction of a Men's Club and the Music College has been sanctioned by the Syndicate.

* * * * *

The Founder-Pro-Chancellor made a generous gift to the University of a spacious building constructed at a cost of Rs. 15,000 for use as Ladies' Club. Her Excellency Lady Beatrix Stanley opened the Club Buildings on the 30th October, 1934.

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RESEARCH

Besides a large number of extension lectures delivered by the members of the Teaching Staff the following members have submitted papers to various Conferences and Journals :—

MR. R. RAMANUJACHARIAR.

Yamunacharya's Refutation of Dehatmavadaat (Tenth session of the Philosophical Congress).

MR. P. S. NAIDU.

1. On Locke and critical Realism.
2. On the Doctrine of Redemption according to Lokacharya.
(Tenth session of the Philosophical Congress).

MR. C. T. SRINIVASAN.

Into Matrix of Memory. (Tenth session of the Philosophical Congress).

MR. S. K. GOVINDASWAMI.

1. Some problems of the reign of Rajadhi Raja II.
2. A note on a Pala image of Ganapati at Kumbakonam. (Journal of Indian History).
3. Chola Painting. (Journal of the Indian Society of Oriental Art Part II).

PROFESSOR C. S. SRINIVASACHARIAR.

1. Baroda and its South Indian Dewans. (Sayaji Rao Gaekwar Diamond Jubilee Commemoration Vol.)
2. The Historical material in the Diary of Anandaranga Pillai (1736-61) Two chapters. (Journal of Indian History).

DR. B. V. NARAYANASWAMI NAIDU.

1. Some aspects of Economic Planning. (The Eighteenth Indian Economic Conference).
2. Agricultural Marketing in India. (Madras Agricultural Conference).

MR. B. RAMAMURTI.

1. On the rank of a quadric related to the rational norm curve. (Journal of the London Mathematical Society, Vol. 9).
2. On quadrics poristically related to a rational norm curve. Proc. Camb. Phil. Soc. Vol. 30).
3. A covariant specification of the simplex inscribed in a rational norm curve in a space of odd dimensions and circumscribed to a quadric inpolar to the curve. (Journal of the Indian Mathematical Society XX).

DR. S. SIVASANKARANARAYANA PILLAI.

1. On the sum function of the number of prime factors of N. (Journal of the Indian Mathematical Society XX).

MR. S. SUBRAHMANYAN.

1. On Synges paper. (Bull. Academy Sc. U. P. III 2).
2. On a certain condition of Frish's—(Journal of American Statis. Association September, 1934).
3. Deviazione geodetica in uno spazio a curvatura costante (Boll. Unione Math. Italiana XIII-4).

DR. S. R. RAO.

1. The secondary structure in crystals. (Current Science Vol. II, p. 281).
2. Diamagnetism of organic liquid mixtures. (Indian Journal of Physics, Vol. 8, p. 483).
3. Magnetism of Tin. (Nature Vol. 134, p. 288).

DR. S. R. RAO AND P. S. VARADACHARI.

1. Diamagnetism and molecular association in organic liquids. (Current Science Vol. 2, p. 475).

2. Diamagnetism of organic liquid mixtures at different temperatures. (Proceedings of the Indian Academy of Sciences, Vol. I, p. 77).
3. Magnetic properties of organic vapours. (Nature, Vol. 134, p. 812).

DR. S. R. RAO AND MR. G. SIVARAMAKRISHNAN.

A new method of determining the magnetic susceptibilities of gases and vapours. (Proceedings of the Physical Society, London, Vol. 46, p. 318).

DR. S. R. RAO AND MR. S. SRIRAMAN.

Diamagnetism of nitrobenzene at different temperatures. (Indian Journal of Physics Vol. 8 p. 315).

DR. S. N. CHAKRAVARTI AND MR. M. SWAMINATHAN.

1. A synthesis of 2 : 3—Methylenedioxy-11 : 12 dimethoxy-tetra hydroprotoberberine, an isomer of tetrahydroberberine and a synthesis of 2 : 3 : 11 : 12 Tetramethoxytetrahydroproto berberine, an isomer of Tetrahydropalmatine. (Journal of Indian Chemical Society, 1934, II, 107-115).
2. Synthesis of 5 : 6 Dimethoxyhomophthalic acid and of some monomethoxy homophthalic acid. (Journal of Indian Chemical Society, 1934, II, 101-107).
3. O-Aldehydo-carboxylic acids. Part I. A new general method of synthesis of Phthalomic Acids. A synthesis of ψ -opianic acid and a new synthesis of M-opianic acid. (Journal of Indian Chemical Society, 1934, 715-720).

MR. T. S. RAGHAVAN.

Somatic Chromosomes of *Virginea Indica*. (Journal of Indian Botanical Society).

MR. R. V. SESHAIYA.

1. The Anatomy of *Paludomus Tranchurica*. (Records of the Indian Museum Vol. XXXVI. Part II. June, 1934).
2. A further note on the style sacs of Gastropods. (Records of the Indian Museum, Vol. XXXVI. Part II. June, 1934).
3. The anatomy of the Indian *Melaindae*. (Indian Science Congress, January, 1935.)
4. The anatomy of *Rachisellus practermissus*. (Indian Science Congress, January, 1935).

MR. A. RAMAKRISHNA REDDY.

The gastric armature of South Indian Decapod Crustacea.

Notes

A NOTE ON THE RANDOMNESS OF THE DIGITS IN π ¹

By

G. V. KRISHNASWAMI AYYANGAR

(*Annamalai University*)

When Mr. Venkatachari came to me with this problem set to him by professor Narasinga Rao, I was not aware that it has been dealt with before. While going through the volumes of the Journal of the Royal Statistical Society in another connection, I came across the Presidential Address to the Society by Edgeworth² in which a reference is made to this problem. This naturally led to other references. As some of these references are now out of print and generally also on account of the interest of the problem, I am briefly noting them here.

De Morgan seems to have expressed doubts about the truly random character of the digits which constitute the ratio π by examining the first 608 digits.³ Jevons has gone so far as to ask, "Why should the value of π , when expressed to a great number of figures, contain the digit 7 much less frequently than any other digit?"⁴ Dr. Venn discusses the question whether there is any unusual divergence from *a priori* chance by examining the following problem as being more appropriate to the science of probability, viz: "Assign the degree of improbability of the event in question, (i.e.) its statistical rarity" and judge whether this improbability gives rise to any grounds of suspicion. By the usual methods of calculation the chances against an excess or defect of 18 from the fair average 70 are about 49 to 1 in respect of any specified digit.⁵ But Dr. Venn observes that "of course what we want to decide are the chances against *some one* of the ten* showing

1. Journal of the Annamalai University, Vol. III, No. 2, pp. 205-207.

2. Journal of the Royal Statistical Society, Vol. 76 (New Series), 1912-13; p. 165, etc. Presidential Address of Professor F. Y. Edgeworth on the Use of the Theory of Probability in Statistics relating to Society.

3. De Morgan, Budget of Paradoxes, p. 291.

4. Jevons, Principles of Science, p. 529.

5. See S. Venkatachari, The Sequence of Digits in π , Journal of the Annamalai University, Vol. III, No. 2, § 4.

* *at least.*

this divergence."⁶ This can be approximately determined by the fraction $(49/50)^{10} = .817$ about. This represents odds of only about 9 : 2 against such an occurrence which is nothing remarkable.

Mr. Edgeworth gives the rationale of the "paradox" adduced by De Morgan in his Budget. The probability of divergence between theory and fact usually calculated relates to the occurrence considered as a single event. When there are several trials, the probability of failure in some one trial becomes serious. "If you go on exposing yourself to risk you must expect to get hit."

It would be interesting to notice that while the digit 7 occurs 51 times in the first 700 figures of the expansion as given by M. de Montessus de Ballore, it also occurs 51 times in the first 690 figures; it occurs 52 times in the first 707 figures and 53 times in the first 708 figures.⁷

Perhaps a word may be said about the randomness of the arrangement of the figures in the expansion. "If we look to the process of production of these digits no extremer instance can be found of what we mean by the antithesis of randomness; every figure has its necessarily preordained position, and a moment's flagging of intention would defeat the whole purpose of the calculator. And yet, if we look to results only, no better instance can be found than one of these rows of digits if it were intended to illustrate what we practically understood by a chance arrangement of a number of objects. Each digit occurs approximately equally often, and this tendency develops as we advance further; the mutual juxtaposition of the digits also shows the same tendency. . . . In fact, if we were to take the whole row of hitherto calculated figures, cut off the first five as familiar to us all, and contemplate the rest, no one would have the slightest reason to suppose that these had not come out as the results of a die with ten equal faces."⁸ Dr. Venn has also given a graphical display of the succession of digits in π ; and so far as the eye is a guide the arrangement answers quite fairly to the description of randomness.⁹

6. Venn, *Logic of Chance*, p. 248, where he considers the number of sevens in π expressed to 708 decimal places.

7. See the value of π given by Mr. Shanks in the *Proceedings of the Royal Society of London*, Vol. 21, p. 319. He has calculated π to 707 places from $\tan^{-1} 1/5$ and $\tan^{-1} 1/239$. The several digits in these two magnitudes calculated to 709 places are given there. They show the same divergencies.

8. Venn, p. 111.

9. *Ibid.*, p. 114-115 for method and p. 118 for figure. The numbers 0-7 are taken each to represent one of the eight points of the compass. Neglecting the first figures the sequence of the digits 0-7 in the expansion indicate the sort of path along which one should travel by these steps.



Some Dance Poses inside the Chidambaram Temple.



Some Dance Poses inside the Chidambaram Temple.

A NOTE ON SOME SCULPTURED DANCE POSES IN THE INNER PRECINCTS OF THE CHIDAMBARAM TEMPLE.

By

B. V. NARAYANASWAMY NAIDU AND P. S. NAIDU

The Madras Epigraphical Report for 1914 draws attention to the existence of the dance poses in the Eastern Gopuram of the Chidambaram temple. Mr. Manavalli Ramakrishna Kavi, M.A., the editor of *Nāṭyaśāstra*, says : “ In the compartments of the east and west gopuras in the Natarāja temple at Chidambaram in South India these *karanas* were cut on rocks with appropriate verses from the *Nāṭyaśāstra* underneath each of the postures. . . . The Government Department discovered their existence and reported this with the illustrations in the Madras Report for 1914.”¹

We wish to point out that these dance poses occur not only in the Eastern and the Western Gopurams, but also in the Northern and Southern Gopurams, in the hall of 1,000 pillars, in the temple of Sivakami Amman, in the *Nritta Sabha*, in Sri Subramania's Shrine, in fact, in the ceilings and walls, of every structure in the temple. These dancing figures meet one at every turn, and the entire shrine is, as it were, snowed in under a plethora of the sculptured dance-poses.

Fergusson, in his “History of Indian and Eastern Architecture”, writes : “The oldest thing now existing here is a little shrine in the inmost enclosure. . . . A porch of fifty-six pillars about 8 feet high, and most delicately carved, resting on a stylobate, ornamented with dancing figures, more graceful and more elegantly executed than any others of their class, so far as I know, in Southern India. . . . White-wash and modern alterations have sadly disfigured this gem, but enough remains to show how exquisite, and consequently how ancient, it was.”² Jagadisa Ayyar, while quoting the above passage from Fergusson, remarks : “The *Nritta Sabha* has fine sculptural representations in its base. . . . The fine architectural carvings, which attract the eye of every one, are on the niches of the four main outer gopuras. These contribute, in a great measure, to the greatness of the temple.”³

We have photographed and reproduced here some of the graceful and elegant poses mentioned by Fergusson. Further work on the subject is proceeding.

1. M. R. Kavi, M.A. : *Nāṭyaśāstra*, pp. 11-12.

2. Fergusson : *History of Indian and Eastern Architecture*, pp. 374-75.

3. Jagadisa Ayyar : *South Indian Shrines*, p. 206.

Reviews

Banking Law and Practice in India.—By M. L. Tannan, M.Com., Bar-at-Law, I.E.S., Butterworth and Co. (India), Ltd. Pages 601, price, Rs. 15.

This well-known writer who was Professor of Commerce in the Sydenham College of Commerce and Economics, Bombay, and who is now Secretary, Indian Accountancy Board and Under-Secretary, Department of Commerce, Government of India, has brought out a second edition of his book on Banking Law and Practice in India. It has been considerably revised and enlarged and the new volume includes the latest rulings of the Courts of England and India on many fundamental issues thus making the book up-to-date. This is one of the best books written on the subject.

The introduction deals with the history of banking in India. The learned author points out that the Negotiable Instruments Act in India is not comprehensive, in spite of the fact that the Act was amended several times. The author next deals with the relation between banker and customer, banking organisations and kindred topics. The advantages of cheque currency are clearly discussed and a plea made for the popularisation of the cheque habit in India. Mr. Tannan points out that in India there is one banking office for every 484,066 persons while in the United Kingdom there is one to every 4,816 persons. Hence arises the need for opening more banking offices in India. Chapters VI and VII are devoted to such topics as bankers' responsibilities regarding the payment of customers' cheques, the duties of collecting banks, the pass book and its uses, recovery of money paid by mistake, and the manner of closing customers' accounts. The closing chapters describe the nature of the bank's investments and also other services that a bank can render.

Throughout the book stress is laid on the practical aspect of the subject and the relevant statutes and specimen forms given in the appendix increase its usefulness. The information given is precise and accurate, the style easy and lucid. The presentation is clear and scholarly. This work is of inestimable value to all those interested in the theory and practice of banking in India.

B. V. NARAYANASWAMY.

NAVEENATARKAM.

'Naveenatarka', the first Tamil publication of the Annamalai University is an interesting venture and welcome addition to the Tamil Literature. It is a compendious, yet fairly comprehensive introduction to the study of Aristotelian or European system of Logic in Tamil. Logic is, of course, one of the abstract sciences of indigenous origin in ancient India, fully developed and highly advanced centuries ahead of many other countries of the civilised world ; and Tamil Language counts more than one treatise on Logic, either translations or adaptations from the Samskrit originals. Yet they are all conceived, designed and presented in the old scholastic or doctrinaire style, and are meant and mostly studied for purposes of theologic polemics. They are often coloured by the several religious and religio-metaphysical objectives, if not predilections, of their authors. Both their architectonics and execution, spirit and style are too theologic, obtruse and doctrinal, if not artificial, to serve the common taste and ordinary requirements of students of cosmopolitan culture. Without any disparagement to the indigenous systems, we could well wish to see our vernacular literature enriched and engrafted with the best fruits and studies of other systems of thought. Comparative studies are always healthy, and will be very useful. They will invigorate and promote any culture. And no patriotic Tamilian will be guilty of the arrogant presumption that the Tamil Literature is above improvement in any sphere.

In the field of Logic in particular, where the books are none of them original or indigenous, secular or non-sectarian in the Tamil Literature, the publication of this 'Naveenatarkam' by the new Tamil University founded by the great South Indian philanthropist should receive more than ordinary welcome. It is as patriotic in purpose, as it is propitious in the present stage of this University's history. The University authorities have deservedly earned the grateful appreciation of Tamil India by promoting and publishing this book.

The author of this Book, Mr. K. R. Applachariar, Philosophy Lecturer in the Government College in Coimbatore, is to be warmly congratulated for this good book, which augurs well for the success and enterprise of the Annamalai University in the field of new publications. That a new Tamil Logic should be the very first publication of this only Tamil University in India is as appropriate as it is praiseworthy.

The book admits of course of possible improvements both in matter and manner. As a first attempt in a novel field, the author himself cannot and would not claim for it perfection. But that it is a superb model for pioneers in other fields of knowledge is indisputable. Avoiding

pedantry and obtruseness alike, the book aimed at and achieved considerable success in simplicity of style, and clarity and perspicuity in content. The author's verve and wisdom in adapting and coining Sanskrit-terms and terminology for his new book of Logic in Tamil are commendable. They are often aptly expressive and suggestive; and what is even more important, they conform to the honourable and long established traditions sanctioned in the Tamil Literature. The author steers clear of the two extremes (1) of Kleptomania by importing wholesale or by merely transliterating all the foreign or English terms of Logic, as they are, in the Tamil book, or (2) of megalomania by inventing all sorts of clumsy, ill-expressive, novel Tamil phraseology bordering on obscurantism. It may be desirable to avoid disfiguring Tamil with morbid *manipravalam* style, and to minimise resort to Sanskrit terms to the barest and sanest limits of necessity and lucidity. But it is nothing to be regretted that Sanskrit is a handy stand-by reserve freely to bank upon to meet urgent requirements and fresh needs to develop Tamil Culture on new lines. It has the sanction of time and usage; and it will offer no violence to the genius and traditions of Tamil. The Language of the book is both simple and sweet, clear and forceful. It even exhibits a veiled vein of natural humour, always welcome in a treatise on an abstract science. An advanced Tamil scholar may have reduced the number of Sanskrit terms used, and suggested some equally happy Tamil substitutes. The Tamil Literateur may have easily used a more elegant and polished diction. But these are not indispensable in a primer or book of introduction in Logic. On the whole, the book is such that one may well say 'Leave the well alone'. The appearance of such a treatise is both a desideratum and a provocateur. It supplies a felt want, and is calculated to encourage and promote fresh thoughts and attempts in new fields of knowledge in Tamil.

It will take some wind out of the sail of those who ever trot out the bogey of want of good text-books in Tamil in branches of scientific knowledge. And by introducing the leaven of this current European system of Logic, and by creating this new impact of thought, this book is to be hoped to serve to sharpen and fertilise the incisive and astute South Indian intellect, stimulate Tamilian enterprise, and to forge newer links and chains in many a field of scientific knowledge in Tamil. I commend the 'Naveenatarkam' to the Tamilaham as a brave if not bonny, a vigorous if not an elegant enterprise, deserving recognition and appreciation at the hands of all lovers of Tamil culture, both the academicians and the lay students; and I wish it all success.



HIS EXCELLENCY LORD ERSKINE, G.C.I.E.
(CHANCELLOR)



THE HON'BLE DR. RAJAH SIR ANNAMALAI CHETTIAR KT.,
OF CHETTINAD, LL.D.
(PRO-CHANCELLOR)



DEWAN BAHADUR S. E. RUNGANADHAN

(VICE-CHANCELLOR)

1929-35



THE RT. HON'BLE V. S. SRINIVASA SASTRI P.C., C.H., LL.D.
(VICE-CHANCELLOR)

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No. 2

Indian Federal Finance

By

V. G. RAMAKRISHNA AIYAR
(*Annamalai University*)

I

The theory of public finance has been developed chiefly in countries with a unitary form of government. It is not therefore surprising that most of the orthodox canons of the subject tend to neglect the peculiar aspects of federal finance. Of course, there is little fundamental difference of principle between the problems that arise from either form of political organisation, but in detail there are differences sufficiently numerous and important to reduce seriously the value of propositions based upon the one and applied to the other. No 'unitary' public finance can deal adequately with the problems, for instance, of double taxation or of 'intermediate' distribution, as they arise under a federal system.

India's federal finance is to be studied with reference rather to the future than the present. An enquiry into the Indian federal finance raises some difficult economic and constitutional problems. It is further complicated by temporary difficulties, partly by the present economic depression, and partly by the fact that the Indian budgets, Central and Provincial have been thrown completely out of gear. The immediate financial prospects cannot safely be made the basis of a rigid constitutional scheme. It will be necessary to aim at a considerable degree of elasticity in the financial framework so that changing industrial and economic conditions in India at a later date might make it imperative to modify the financial schemes now proposed.

The success of a modern Government depends in a very large measure on the financial resources which it can command for carrying out its policies. The self-rule of the Indian people, if it is to fulfil its cherished ends, must be based on a sound financial organisation. This does not necessarily mean that high taxation is a condition of the successful working of self-government. Taxes will have to be raised under the reformed constitution according to the people's capacity to pay, whatever may be the amount yielded by them. Though high taxation is not a condition of self-government, neither can low taxation be necessarily expected as its result. The chief merit of the financial organisation of a self-governing India shall not lie in raising less revenue or retrenching more expenditure than at present but in raising revenue wisely and spending it productively. We will do well to remember Gladstone's saying "Good finance consists more in the spending than in the collecting of revenue." Nothing is more naive than the view entertained in some quarters that under a national regime, the government of the country will be less expensive or that the taxes will be lower. Economy can and must be effected in various directions. Substantial economies in existing expenditure could only be brought about by a comprehensive reorganisation of the system of administration, but it might not be possible here to make any definite allowance for the effect of such reorganisation. In fact, it is a mistake to suppose that the cost of administration as a whole under the new political order will markedly fall off. In dealing with the financial foundation of a Federal Government in India, it is necessary to ensure that a sufficient field is available for raising money by taxation. The field of taxation assumes a definite constitutional importance under a system of Federal Government. The autonomy of the central and local authorities in their respective spheres which is the essence of Federation implies that each of these governments should have unhampered fiscal powers, that is to say, a division of the sphere of government must also include a division of the available sources of taxation.

II

The problem of federal finance in India is largely to find a suitable basis on which to allocate existing or potential sources of revenue between the units and the federal body appropriate to their functions. The authors of the Report on Indian Constitutional Reforms (1918) pointed out that if self-government was to become a reality, the Provinces should be in a position to calculate their resources with certainty, and to some extent be free to develop their own taxable capacity. They proposed therefore that a genuinely federal system of finance should be set up, and that the sources of revenue should be separated between the

Central Government and the Provinces¹. In conformity with this principle, the system of complete separation of heads of revenue was adopted in the Government of India Act (1919).

The main features of the financial organisation in India under the Act of 1919 are : a line has been drawn between the Central and Provincial heads of revenue; customs and excises (other than alcohol and narcotics), income-tax and salt are the principal resources of revenue of the Central Government ; land revenue, excise on alcohol and narcotics and stamps are the three principal sources of revenue assigned to the Provincial Governments. In addition to these important sources of taxation each of the governments derives a part of the revenue from the various departments they respectively administer. For instance, Local Governments derive some income from forest and registration departments, while the Central Government derives a valuable part of its income from commercial services, such as, Railways, Posts and Telegraphs, etc. In fact the position of public finance under the present Government of India Act is that both Central and Provincial Governments have to reckon each on three or four taxes as the mainstay of their financial resources. In examining a future division of the field of taxation, it is only the principal sources of taxation that need be considered with a view to determine which of them should fall under the Central, and which under the Provincial sphere. Constitutionally, it is to be noted that under the present political system the taxing power of the Government of India is absolutely unrestricted in the case of the important taxes assigned to provincial governments. The field of taxation, like the field of other administration, must be co-extensive with the field of legislation in each province.

But the introduction of this system of separated heads of revenue was estimated to result in the Central Budget in a deficit of Rs. 98.3 millions. A committee was therefore appointed under Lord Meston to make proposals for the equitable distribution of this deficit among the Provinces during the transition period. The Committee recommended two kinds of contributions—initial and standard. The initial contributions were based on the immediate financial position of the Provinces resulting from the Reforms. The standard contributions were based

1. Report on Indian Constitutional Reforms (1918), Chap. V.

on more permanent factors.² These provincial contributions were reduced by the Central Government between 1925 and 1928, and finally abolished in 1929 and since that date, the definite separation of revenue resources has been in force.

The system of dyarchy introduced in the Provinces by the Reforms of 1919 was coupled with the principle of joint purse, and this took away any element there was of responsibility. One of the defects of the system of separation of tax resources was that it was viewed as favourable to agricultural than the more industrialised provinces, and this has given rise to a continuous demand that the latter should receive if not the whole, at any rate a part of the income-tax that is collected from their residents, or alternatively they should be entitled to levy a surcharge on the income-tax collected locally. A second and more general defect of the system is that, whereas the Central Government has retained two sources—customs and excise and the income-tax—which are flexible and capable of yielding expanding revenue—the expenditure of the Central Government is very largely a fixed charge, consisting mainly of the cost of the army and interest on debt. The Provinces on the other hand which are charged with the duty of developing education and public health services have been left with sources of revenue which are more or less stationary like the land tax.

III

There are certain principles that appear to be essential factors of any scheme of reform of Indian finance. First certain anomalies in our

2. *Initial and standard contributions are as follows:—*

	Initial 1921-22 lakhs.	Standard (expressed as share of 90).
Madras ..	348	17
Bombay ..	56	13
Bengal ..	63	19
United Provinces ..	240	18
Punjab ..	175	9
Burma ..	64	6½
Central Provinces ..	22	5
Assam ..	15	2½
Bihar and Orissa ..	—	10
	—	—
Total ..	983	100

system of taxation should be got rid of ; secondly that if India is to continue to develop at the pace desired, she will have to increase her taxation, and thirdly, whatever scheme of taxation is adopted for the future ought, if possible, to be one that is applicable to the conditions of the States as well as of the Provinces.

Sir Walter Layton, the financial expert with the Simon Commission made important proposals with regard to future allocation of revenues between the Central Government and the Provinces. Layton begins this report with an interesting chapter on India's inadequate revenue. He shows how the revenue per head is low, not only absolutely but relatively being only 6 per cent. of the national income as against 20 per cent. in Japan and one assumption that underlies his financial proposals is that it is both possible and desirable to improve the economic and social conditions of the Indian people by substantial increase in expenditure on the "nation-building" services, and secondly, that it is possible to raise additional revenue for the purpose. This position is really incontestable because Layton has pointed out that more revenue lies at the root of all reform and that in the years to come the spending power of the provinces must largely increase. From a nationalist point of view this appears to be a sound principle in regard to the future of India's finance. The principal argument in favour of a federal constitution in India is to fix the responsibility for a rapid social and economic development on the various local authorities.

Layton's proposals for the imposition of new taxation are regrading of the income-tax, income-tax on agricultural incomes, death duties, excise on cigarettes and matches and an increase in local rates. Sir Walter Layton would make few changes with the existing division of heads of revenue between the Central and Provincial Governments, the notable exception being the proposal for the transfer of commercial stamp to the Central from the Provincial Exchequer (but the difficulties involved in such a transfer have been pointed out by the Percy Committee). The loss of 1½ crores of revenue on account of this transfer is proposed to be made good by limiting the import duty on foreign liquor at 30 per cent. and thus enabling the provinces to levy an additional excise duty calculated to yield a commensurate revenue. Layton has suggested that within a period of 10 years from the working of the new constitution, the Central Government would surrender to the provinces revenue amounting to 12 crores, 6 crores representing the entire proceeds of salt import and excise duty, and another 6 crores representing 50 per cent. of the personal income-tax collected in the provinces. It is also proposed to tax agricultural income and the proceeds of the tax on agricultural income in each province should be made over to the

local Governments. A revenue of 5 crores is expected from this source for the provinces. A more important accession to the provincial revenue is proposed by the two new taxing powers for the provinces *viz.*, the right to levy a terminal tax on goods carried by rail and the right to levy a surcharge on income-tax on all persons to the extent of a quarter the rate at which income-tax is levied by the Central Government. The terminal tax is expected to yield 8 crores to the provinces, and the surcharge on income-tax 3 crores to the provinces. These proposals of new taxation are rounded off by Sir Walter Layton by the suggestion of two national excises on tobacco and matches, the former bringing in 5 crores and the latter 3 crores of rupees respectively. These two taxes also are to benefit the provinces, and their proceeds together with that of the salt duty when surrendered by the Central Government should form a Provincial fund and be distributed among the provinces according to population. The net result of all these financial proposals is that the Provinces will benefit by a revenue of 24 crores from new taxation, and by 12 crores a few years later from surrender of existing revenue of the Central Government.

The Layton proposals are open to considerable criticism. First they go against the federal principle. There are at least 5 taxes—the personal and the agricultural income-tax, and the three national excises which Layton would allocate to the provinces but to be administered by the Central Government. It is the Central Legislature which is to possess the power of annually voting the income-tax and the national excises. No financial arrangement could be more subversive of the political autonomy of the provinces. Again the proposal of dividing the personal income-tax between the Central Government and the Provincial Governments suggests clearly the danger of the provinces being overtaxed in order to meet the urgent needs for revenue of the Central Government or of the Central Government having to overtax itself to meet the urgent need for revenue of the provinces. These proposals fit in well with the constitution of a Central Legislature proposed by the Simon Commission, namely, that it should be representative of the provincial legislatures, and not of general tax payers electing members on a popular basis. In fact in so far as Sir Walter Layton's proposals aim at giving to the provinces sources of revenue which are leviable by the Central legislature alone, they seem to imply a negation of federal government.

Secondly, the Layton proposals contemplate a surrender of revenue by the Central Government within a period of 10 years. Whether such a surrender is possible depends on several factors both of reduction of expenditure and increase of revenue. The history of remission of provincial contributions under the reformed constitution of 1919 is an

object lesson that a future financial arrangement based on the future obligation of surrender of revenue should be avoided if possible.

Thirdly, under the Layton scheme, the Central revenues will be almost entirely deprived of an element of elasticity. In a bad year, it would be difficult to raise the income-tax. The salt tax which has been easily increased by the Central Government in times of stringency will also have been provincialised and thus there would be greater difficulties in raising additional revenues in times of emergency. Again it may be noted that under the Layton scheme too much reliance is placed on the customs and income-tax alone. Under the prospective balance sheet which Sir Walter Layton has drawn up, out of the total revenue of 82 crores, no less than 68 crores are proposed to be raised from two items viz., income-tax and customs, but it is these two items that are likely to be affected in times of trade depression. Finally how far does the Layton scheme help to remove some of the anomalies in the present system of taxation? Layton's proposal that the terminal tax should be taken away from the local bodies and converted into an item of provincial revenue and a consumption tax by levy at every railway station is not commendable. The Simon Commission themselves insist on the inadequacy of resources of the local bodies. If the terminal tax is a proper method, why take it away from them? The Taxation Inquiry Committee have shown that it is a most improper method of taxation tending to become an inland transit duty, and so an impediment to internal trade for the prevention of which the United States of America and the Australian constitutions have specific provision. Again the Simon Commission repeatedly insist that if the Indian States wish to come into a Federation, the first condition must be the abandonment of the inland customs duties. Further there is an urgent need for reduction of railway freight rates. However much new taxation may be needed, an addition to freight rates under the name of a terminal tax does not seem a proper way of levying it.

The inequality of the taxation of land and the necessity for remedying it by imposing an income-tax are emphasised by Layton who says that there has been a very large increase in the net product of land which is enjoyed by the cultivator and the landowner of which the tax-gatherer has succeeded in gathering very little. Layton thinks that there is no justification for the continuation of the present exemption, although he admits that it may be desirable that it should be removed by stages at specified dates. He says that it is only in this way it would be possible to impose a graduated burden upon landholders and to levy from them a share of the increased burden that is necessary in India, and it would prevent the present tendency for savings accumu-

lated in industry to be invested in land in order to escape taxation. The taxation of land in India is a vexed and controversial question which requires a thorough investigation and we cannot therefore be satisfied with the summary fashion in which Layton has disposed of such an important question.

The third condition for an ideal system of distribution of revenues is that it should be one to suit the States as well as the Provinces. Throughout the whole of this discussion, it is assumed that the new constitution should from the very beginning proceed upon a federal basis, and this is one of great importance in dealing with the financial relations between the States and the Provinces. If a federation of British Indian provinces is to be formed now, and its conventions are established without regard to the States, it would be much more difficult for the States to enter it later than if their point of view has been considered from the first. It is reasonable to think that what the States want is a fair financial deal, and a voice in common affairs. Any system of distribution of the taxes applicable to the States as well as the Provinces must involve as little interference as possible with their internal administration. Applying this principle to the proposals of Layton, we have to consider the case of stamps, excises and income-tax. As regards stamps, no great difficulty would seem to arise. The stamps for the particular classes of transactions that are to be subjected to central taxation can be distributed to the States as to the Provinces and sold through their agency. It would still be open to the States to impose their own stamp duties on other classes of transactions. In the case of Excises, so long as they were limited to the levy of fixed duties at places of origin, no difficulty need arise. The cotton excise duty was levied in the States as well as in the Provinces, and no complaint was even heard that it was not properly levied. But there is a real difficulty in the case of the income-tax. There are many States which have no income-tax at all. Those that levy it do not levy it at the same rate as the Government of India. It would be difficult to induce all the States to impose the income-tax at the Government of India rate and to secure efficiency in its administration. So the only way of meeting this difficulty seems to be to leave the whole of the present income-tax to the units of the Federation, and to give to the Government of India a large share of the excises.

As regards the share the States are entitled in the existing Central revenues, Layton's proposals seem to dispose of the matter in a summary fashion. For the purpose of appraising the claim of the States, Layton first works out the increase in the Customs duties on imports that has accrued since the beginning of the war and the increase in the

cost of the army in the same period. He attributes to the States 16 per cent. of the former, and 22 per cent. of the latter, gets figures of 6 and 5½ crores as the result of the calculations and declares that the claims and counter-claims are of a similar order of magnitude. He adds "it is not necessary to discuss here any of the minor claims, namely that the States should take the responsibility for part of the debt or increase in other All-India charges on the one hand or that the States should have a share in the salt tax, railway receipts and other budget items on the other, for the amounts involved are small, and if admitted on the one side or the other, would not greatly affect the picture that has been given of India's finances." It is difficult to see, when the States claim a share of the customs which are imposed for the purposes of India as a whole, they should be offered a share only in the increase in customs since the commencement of the war; again there is no justification for taking different percentages in reckoning their share of income from customs, and their share of the expenditure on defence. The other items are disposed of as insignificant, but they are not so, for they will make a serious difference to the amount of the revenues available for distribution between the Central authority and the units of the Federation. And this is an additional reason for meeting it in the first instance by inviting the States to be parties in the great adventure of the future instead of making a grudging settlement with them now which will be another obstacle to their entering into partnership in future.

The most important proposal under the Layton scheme is that relating to the provincial pool which is in effect that certain local excises e.g., those on cigarettes and matches should be collected centrally and distributed on *per capita* basis. There should also be added to the pool the surplus arising from the Central Budget if and when a condition of surplus is attained. It might be said that this proposal is a negation of provincial autonomy; that the provincial legislatures should enjoy, proceeds of revenues without the unpopularity of imposing the taxes, that there would never be any certainty of the Central legislature passing them, and that therefore no province could be certain as to what it had to spend or again *per capita* distribution would be unfair to certain provinces inasmuch as the consumption of salt or tobacco per head is very much greater in some than in others. But one thing in favour of the scheme is excises are a corollary of the customs, and like the customs ought to be centrally administered. Such administration tends to be cheaper, and more efficient; and as it conduces to uniformity, it also tends to put a stop to those inequalities in provincial levies which have contributed to the differences in provincial revenues.

IV

We shall next consider the recommendations of the Peel Committee officially known as the Federal Finance Sub-committee which was the financial adviser to the Second Round Table Conference. The committee was appointed "to examine and report upon the general principles upon which the financial resources and obligations of India should be apportioned between the Federation, the British Indian units jointly and severally, and the States units."

The committee have started from the standpoint—(1) that it is undesirable to disturb the existing distribution of resources between the various governments in India; (2) that practically the Federation and its constituent units are likely to require all their present resources if not fresh sources of revenue so that it is improbable that any considerable head of revenue could be surrendered initially by any of the governments without the acquisition of alternative resources. The importance of the recommendations of the Committee may be gauged from the general principles they have enunciated in regard to some of the main items of federal finance. As regards the allocation of resources between the Federation and its constituent units, the committee observe that the Federal resources should as far as possible be confined to revenues derived alike from the inhabitants of the provinces and of the States or by any agreement with them of a simple character. As regards the classification of revenues, the most satisfactory solution would be that the Federal taxes and the Provincial taxes should be fully scheduled; in regard to the relations of Federal and State taxation, the abolition of all those taxes in the States as internal customs, which may be economically inadvisable from the point of view of the Federation as a whole. As regards Grants to constituent units, it should be open to the Federal Government with the assent of the Federal Legislature not only to make grants to provinces or States for specified purposes, but also, in the event of Federal revenues showing permanent surplus, to be free as a possible alternative to reduction of taxation, to allocate the surplus proceeds to the constituent units of the Federation, both States and British Indian Provinces.

As regards the borrowing powers of the units, though a province may raise loans in India upon the security of its own revenues, the Federal Government will have to exercise a restricted power of control over the time at which the provinces should issue their loans; in order to secure that loans are raised at the cheapest rates, the security should be as wide as possible and in the interests both of the federation and of the units, it is suggested that all loans raised by the Federal authority

should be secured not only on the revenues of the Federation but also on the revenues of the provinces of British India. As the Peel Committee had confined themselves mainly to the formulation of general principles, they recommended the appointment of an expert committee and this brings us to consider the report of the Federal Finance Committee, popularly known as the Percy Committee. This committee was appointed to estimate the probable financial position of the Federal Government and the provinces of British India in the early years of the Federation, and to advise on certain aspects of federal finance mainly on matters affecting the future relationship between the Federal Government and the constituent units.

The Report of the Percy Committee is an attempt to present a financial scheme for the Federation worked out in all its details. The authors of the report start with a proper emphasis on the abnormalities of the present financial situation due largely to the world depression which makes it difficult to set forth accurately the possible revenue and expenditures of the Central and Provincial Governments of India. Consequently they are obliged to make certain assumptions and formulate their schemes on the basis of such assumptions.

The first point of the Committee's work is to form a rough forecast of the budgets of the Federal and the Provincial Governments. The revenue estimates are based on the first Finance Act of 1931 i.e., before the present surcharges came into force. The committee have warned the governments against, on the one hand, the error of supposing that the level of taxation may be lowered, and on the other, of the temptation of increasing the expenditure under the pretext of new constitutional changes. Already a majority of the governments are carrying into the future a load of deficits actually incurred which is an initial handicap to a scheme of Federal Finance.

The Committee have not allowed themselves to be hampered unduly by the abstract principles of Federal Finance and they have also deviated from the lines chalked out by the Peel Committee. In the first place, the Peel Committee's recommendation that taxes on income should be transferred to the provinces with the exception of the Corporation tax has been materially modified by the Percy Committee. Secondly, the Peel Committee's suggestions for federalising commercial stamps has been set aside by the Percy Committee on the ground that the simple constitutional solution would be to class all stamps duties as provincial sources of revenue. Thirdly, the Percy Committee afford no hopes of practical value regarding the new taxes suggested by the Peel Committee either for the Federation or for its constituent units.

Fourthly, the questions regarding the adjustment that may be necessary as between the present Central Government and the Federation to be formed have been disposed of by the Percy Committee in a summary fashion. The Committee have also dismissed as too remote a possibility the suggestions of the Peel Committee that the cash contributions of the States and the provincial contributions should, if possible, be wiped out.

The Percy Committee was appointed not so much for devising a scheme for British India and the States or Indian India. The outstanding points in regard to the position of the Railways, the pre-Federation Debt, the pension charges, the claim of the maritime States to customs revenue, and the adjustment of the tax systems of the States to those of British India have been disposed of in a summary fashion that some of these items would balance themselves. The question of the uncovered Pre-Federation debt has been needlessly pushed to the foreground creating an impression that central finance might be under fear of debits. The committee have found that the other assets of the present Central Government which will pass to the Federation would adequately compensate for the extra liability.

Again in the case of pensions it is difficult to understand how the claims of British India can remain the same both when the pensions are due and when they have been cleared off. Again what contribution will the States make to the Federation to balance the contribution from the Railways which the committee put at 5 crores. A better thing would be to frame a scheme by which fluctuations in the earnings of the Railways could be reflected in the provincial contributions or in the allocation of part of the income-tax to the various provinces.

Even if we leave aside such items as the Railways, and Pensions, etc., there is still the question, to put it in the language of the committee, "whether or to what extent this special contribution from the provinces can be regarded as balanced by a special burden borne by the States." The answer of the Committee is that the power of the Federal Government to redeem inequalities will be limited by intractable facts and it is doubtful whether a jealous comparison of the relative burdens offers a sound basis for a successful partnership.

We have so far confined ourselves to the main points of the report of the Percy Committee. We have now to ask—what is the federal aspect of the financial scheme recommended by the committee? A study of the main features of the Percy Report shows how much the committee has been dominated by the facts of the present financial situation in India without much regard to the principles on which the federal

development of India should proceed. As the Central and Provincial Governments in India at present are not in a prosperous condition the Committee has proposed subventions to provinces and contributions from provinces to the Central Government. The system of contributions has been condemned by all financial experts as making two sets of governmental authorities subservient to each other. This system of contributions and subventions is subversive of the wise principle that each government should live of its own. It is no sufficient reason that it should continue because Central and Provincial governments in India are faced with deficits. Deficits are temporary and can be wiped off and the lines of future federal development should not be clouded by temporary financial conditions.

In regard to allocation of taxes also the Federal Finance Committee has departed from the straight path of federal finance. The committee acknowledge obvious defects in any system based upon the principle of taxation by one government for the benefit of the other governments and yet they recommend it and have brought down income-tax from a national tax to a tax leviable for the benefits of the units subject to a right of federal surcharge. Although there is a strong case for federating Excise—'it is a tax on consumption which in economic theory should not be levied by one governmental unit on the consumers of another'—the committee recommended its retention as a provincial source subject to the powers of the Federal government to impose a surcharge for its own purposes. Another variation from federal finance allowed by the committee is that the collection of federal taxes may be placed in the hands of the units themselves, a method of collection which may be cheap to start with, but will become dear in the long run when the interests of provinces and federation diverge. The whole idea of allowing federal and provincial governments to cross into each other's financial domain is opposed to the principles of federation. Lastly the committee have done nothing to bring the Indian States within the ambit of federal taxation. None of the Federal taxes is to apply to the subjects of Indian States. These criticisms of the report of the Finance Committee might be met by saying that they had to face existing facts like the treaty and the sovereign claims of the Indian States and the present financial situation in India. The financial arrangements proposed by the Percy Committee Report go to show that what is aimed at is not full federation but a *quasi* federation.

The financial system that it proposes partakes of the features of both confederate and federal finance. Of a federal character on the side of revenues are customs, and export duties leviable by the Central government, federal fees, federal surcharges on taxes on the income

or capital of corporations both in British India and in Indian States; on the side of expenditure are the cost of defence and foreign relations and of the debt services and of federal institutions like the federal court. Of a confederate character on the side of revenue are subsidies from Indian States and contributions from the provinces of British India (which are to be of two kinds normal and emergency contributions) to the federal Government; on the side of expenditure there is little of a confederate character, for confederations live at the mercy of the units. But the federal financial system proposed by the Percy Committee partakes of some of the character of a centralised government that now exists. It is not the province of the economist to decide between 'centralist' and 'decentralist' policies as such on general grounds. On economic grounds however, one should be inclined to say that a federal scheme of government always tends to be wasteful, and in so far as a constitution is in making, decentralist policies should be discouraged, especially as increasing mobility is, in all countries, making federal divisions more and more lose their original significance. But as the Simon Commission point out the question whether India will move towards centralisation in future depends on larger considerations than purely financial ones.

V

The Percy Committee (1932) forecast a surplus in the central budget during the first years of the Federation amounting to 4½ crores with a corresponding deficit in the Provincial budgets. This Committee as well as the committees of the various sessions of the Round Table Conferences agreed in principle that some division of the proceeds of the income-tax is necessary, but opinion as to the method and amount has varied in accordance with the changing financial situation.

There are two considerations which complicate the situation. One is the creation of two new provinces—Sindh and Orissa—both of whose budgets will certainly be in deficit for sometime to come. The other complication is that the Indian States are not prepared to agree to the imposition of a federal income-tax within their borders. This difficulty among others leads to the suggestion that the income-tax should be assigned entirely to the Provinces. But as the Central Government could not afford to lose so large a revenue, at any rate for sometime to come, this would have involved reviving the undesirable plan of provincial contributions to the Central Government.

The scheme of distribution therefore proposed in the White Paper is that taxes on income from federal sources should be permanently assigned to the Federation, and that a specified percentage—not less than

50 per cent. nor more than 75 per cent. of the normal taxes on income (except the corporation tax) should be assigned to the Provinces. But in order not to embarrass the Central Government in the present financial stringency, the Federal Government should be entitled to retain out of this allotted portion an amount fixed for 3 years, and thereafter reduced to zero over a further period of 7 years. In addition the Federal Government would have power to levy a surcharge on taxes on income exercisable in case of financial stringency—provided that such times the States would also make equivalent contributions to the Federal fisc.

The plan of a permanent division of the income-tax raises certain difficulties. It is objected, for example, that any alteration in the rate of tax will affect both parties, although there may be only one which desires an increase or a decrease in yield. But the Joint Select Committee considers that for sometime this will not be serious, since both Federation and Provinces will need as much money as can be obtained from income-taxes and the rate will depend therefore on taxable capacity rather than on the position of the budget.

The Joint Select Committee therefore has endorsed in general the proposal of the White Paper. But as it is unlikely that for sometime to come the Central Government will not be able to do much more than find funds for the deficit Provinces, and as an early distribution of any large share in the income-taxes is improbable, the Joint Select Committee has considered it advisable to leave the actual time-table of transfer (3 and 7 years in the White Paper), as well as the percentage of income-tax to be transferred to be determined by Order-in-Council at as late a date as possible.

The Joint Select Committee accepts the proposal that the Federation should retain the yield of the Corporation tax on the income or capital of companies, and that after 10 years, the tax should be extended to the States. They do not approve, however, of the proposal that Provincial legislatures should have the power to impose a surcharge on personal income-tax.

As regards agricultural income-tax, the White Paper proposed that the Provinces should have exclusive power to impose taxes on agricultural incomes which are not at present subject to income-tax—and this has been approved by the Joint Select Committee. In regard to Excises, the Joint Select Committee has approved of the White Paper proposals to empower the Federation to allot to the units a share of the yield of the salt duties and excise duties other than those specifically

assigned to the Provinces, and also of export duties. The proposal with regard to salt and excise duties is made in order to provide more elastic sources of revenue for the Provinces and to facilitate the introduction of new taxes since they are not likely to be opposed if some of the benefit goes to the units.

The Joint Select Committee has also approved of proposals to vest in the Federation power to impose certain taxes, the proceeds of which must be distributed to the Provinces (subject to the right of the Federation to impose a surcharge for Federal purposes). These are taxes which should be uniform and should be collected through a Central machinery. Since the Federal units will share in the yield from certain federal taxes, they will have an interest in the Federal budget.

VI

THE STATES AND THE FEDERATION

The entry of the States into Federation involves some complicated adjustments with regard to tribute and ceded territories. There is first the demand for remission of the so-called tributes or subsidies from certain Indian States that are now levied. The total amount of this subsidy is about 76 lakhs of which Mysore pays the largest amount. There is a strong case for the gradual abolition of these subsidies. It was however urged on the other hand by certain other States that the subsidies stood on the same footing as cessions of territory and a few other miscellaneous rights conceded by other Indian States to the British Government as compensation for the duty of military defence undertaken by the British Government. It has also been urged that many Indian States maintained State forces at considerable cost which have been treated as part of the forces of India for purposes of internal defence and therefore allowance should be made in assessing the burden of the State units of the Federation as compared with the Provinces for these items of expenditure. The Joint Select Committee (1934) have endorsed the Report of the Indian States Inquiry Committee (1932) and in particular have approved of the gradual abolition over a period of years of any contribution paid by a State to the Crown which is in excess of the value of the immunities which it enjoys.

At the present time many States derive substantial revenues from customs duties levied at their frontiers on goods entering the State from other parts of India. Internal customs barriers are in principle inconsistent with the freedom of interchange of a fully developed Federation, and it is necessary to substitute other forms of taxation for these internal customs. Accession of a State to the Federation should imply that

it will not set up a barrier to free interchange so formidable as to threaten the future of the Federation. In the case of maritime States which have a right to levy sea customs, they should be allowed to retain only so much of the customs duties which they collect as is properly attributable to dutiable goods consumed in their own State. This may be difficult to arrange in view of existing treaty rights, but if insistence upon these rights by any State would prevent genuine uniformity in customs rates at State ports, and ports of British India, then it is doubtful whether the State in question could properly be admitted to the Federation.

VII

COST OF FEDERATION

The fresh burdens upon the tax-payers as a direct result of the constitutional changes are estimated to be $\frac{3}{4}$ crore of rupees for the Federal Government and another $\frac{3}{4}$ crore of rupees for all the Provincial Governments together. These items represent the estimated cost of an increase in the size of legislatures, the establishment of a Federal Court, etc. It is also estimated that there will be an initial deficit in the new province of Sindh of about $\frac{3}{4}$ crore of rupees of which about 10 lakhs represents the cost of new overhead charges. The remainder represents a deficit which is now met out of the revenues of Bombay. If this is met from Central revenues, it will, in effect relieve Bombay's present financial stringency. Similarly there will be a deficit of about 30 lakhs per annum of which half represents new overhead charges, and half represents relief to the existing government of Bihar and Orissa. As to the other provinces, Bengal's needs will be met mainly by surrender of half the jute export tax by the Federal Government, but Bihar and Assam will require special consideration. According to Sir George Schuster's estimates the total subventions to deficit Provinces will be about £400,000. In addition the Government must adjust its finances to the separation of Burma. Although the separation of Burma will not in itself involve a financial loss to the tax-payers of India and Burma as a whole, the revenues of India will suffer a loss which is estimated to be as much as 3 crores per annum less the yield of any revenue duties on imports from Burma which may be introduced from the date of separation.

The introduction of the States to the Federation will also require certain financial adjustments. These will ultimately lead to net loss to the federal revenues of something less than 1 crore of rupees, but this might be extended over a period of years. The surrender of half the

jute tax has already been provided for in the Budget for 1934; it remains to find about 2 crores, and to make good the loss of revenue from Burma. The Joint Select Committee (1934) however point out that the greatest part of this additional expenditure by the Central Government would have to be met quite apart from constitutional changes for it is impossible that the Provinces should be allowed to run up growing deficits. The Central Government under present depression conditions is paying its way, and setting aside about 2¼ millions annually for debt reduction. The increased revenue required represents only about 1½ per cent. of the present budget, and there are signs of an improvement in tax revenues and State railway receipts. It is clear therefore that financial difficulties cannot be used as a serious argument against Federation.

On the Importance of the Distinction between The Ideological and the Idea-Psychological to Berkeley's Metaphysics.

By

P. S. NAIDU,

(Annamalai University)

The distinction between idea as image or a mere particular concrete event in an individual consciousness, and idea as signifying an abstract universal meaning is now commonplace in metaphysics. Both Bosanquet and Bradley have, in unmistakable terms, defined the distinction between the *idea-logical* and the *idea-psychological* in their treatises on Logic. Bosanquet says, 'In judging we use ideas, but the ideas which we use are not mere particular mental images, the perishing existences which pass through consciousness, and which *qua* particular psychical states on a level with mere sensations, never recur. . . . ' In judgment ideas are employed solely for the sake of their general signification, and without reference to their particular existence.¹ In a somewhat similar strain, while discussing the nature of ideas as symbols, Bradley draws a distinction between the *that* (or existence) and the *what* (or the content) of an idea.² 'These two senses of idea, as the symbol and the symbolised, the image and its meaning, are of course' he says, 'known to all of us. But the reason why I dwell on this obvious distinction is that in much of our thinking it is systematically disregarded.'³ This disregard is manifest in Locke and Berke-

1. *Logic*. Vol. I, p. 68.

'I shall follow' says Bosanquet in the Introduction to Volume I of his *Logic*, 'Mr. Bradley in using 'idea' for a fixed content or logical meaning, not for the psychical images which pass through the mind and never recur—for the signification, so to speak, of the signal flags, not for the particular flags themselves, whose meaning is not affected if different bits of cloth are used on every occasion.' p. 44.

2. *Principles of Logic*, Vol. I, p. 3.

3. *Principles of Logic*, Vol. I, p. 6.

'In England, at all events, we have lived too long in the psychological attitude. We take it for granted and as a matter of course, that like sensations and emotions, ideas are phenomena. And considering these phenomena as psychical facts, we have tried (with what success I will not ask) to distinguish between ideas and sensations. But, intent on this, we have as good as forgotten the way in which

ley also, and the contention of this paper is that the fundamental fallacies in Berkeley's metaphysics take their origin in the illicit identification of *idea-logical* and *idea-psychological*.

The gist of Berkeley's polemic against representationism amounts to a denial of abstract ideas. This denial, which is the corner stone of his subjective idealism, is based upon a false identification of the object of knowledge and the content of presentation.

Berkeley takes Locke as the champion of abstract ideas, and attempts to shatter his arguments. Locke too, like Berkeley, confounds the idea with the presentation, yet unlike Berkeley he admits the possibility of forming abstract ideas.⁴ According to him 'the process of abstraction is a process of fixing attention upon those attributes that characterise each of the indefinitely numerous individuals to which a general name is applicable, and ignoring those attributes that characterise only some or one of them.' There is a certain amount of truth in Locke's contention, for through discriminative attention it is possible to obtain a 'general idea' (an idea common to different objects), say of a particular colour red or green, applicable to the several objects attended to, which differ in other qualities, namely, in weight, smell, shape, taste, etc. This type of abstraction or discriminative attention given to the data of the different senses might be conceded even by those who identify the psychical image with the logical meaning; but when from examples of this type one argues to the possibility of general *abstract* ideas, then such arguments may be challenged. Locke appears to use such arguments, and Berkeley challenges him on that account. 'For myself' says Berkeley, 'I find indeed I have a faculty of imagining, or presenting to myself, the ideas of those particular things I have perceived, and of variously compounding and dividing them. . . . To be plain, I

logic uses ideas. We have not seen that in judgment no fact is ever just that which it means, or can mean what it is; and we have not learnt that, wherever we have truth or falsehood, it is the signification we use, and not the existence, we never assert the fact in our heads, but something else which that fact stands for. And if an idea were treated as a psychical reality, if it were taken by itself as an actual phenomenon, then it would not represent either truth or falsehood. When we use it in judgment, it must be referred away from itself. If it is not the idea of some existence, then, despite its own emphatic actuality, its content remains but 'a mere idea.' It is a something which, in relation to the reality we mean, is nothing at all.' *Logic*, Vol. I, p. 2.

4. Locke's Essay, Bk. 2. ch. xi, 10 and 11: ch. XXXII, 6f. Bk. 3, chs. iii and 6: Book 4, ch. vii., 9.

own myself able to abstract in one sense, as when I consider some particular parts qualities separated from others, with which, though they are united in some subject, yet it is possible they may really exist without them. But I deny that I can abstract from one another, or conceive separately, those qualities which it is impossible should exist so separated ; or that I can frame a general notion, by abstracting from particulars.' ⁵ The contention here is that a particular sensible quality like green or red which, though occurring in different individuals is yet capable of being a presentation, is real, while an *abstract general idea* like triangularity, which can never be a presentation, is not real.

To understand Berkeley's position with respect to abstract ideas we should note the exact sense in which he is prepared to admit general ideas. 'And here it is to be noted' he says, 'that I do not deny absolutely there are *general ideas*, but only that there are any *abstract general ideas* an idea, which considered in itself is particular, becomes general by being made to represent or stand for all other particular ideas of the same sort.' ⁶ But this is exactly what Locke also holds, though he expresses himself in rather ambiguous language, and Berkeley's criticism of Locke loses much of its force when we examine it carefully. The 'significant particular idea' of Berkeley can become significant only when we ascribe general characteristics to it. How do we know 'ideas are of the same sort' unless we can abstract ? Berkeley is quietly shifting his ground and is assuming the process of abstraction as we ordinarily understand it. It is a psychological truism that in the simplest act of perception the object perceived is clothed with conceptual significance, as otherwise perception would be impossible. And even the so-called process of perceptual abstraction discussed above, the act of separating off the common element from a number of complex presentations, would never yield a general idea unless the separated component was already an abstraction. If, as Berkeley holds, the object of knowledge is never anything but a presentation, then the disjunctive denotation acquired by a term is evidently the only sense in which the term can be used as an abstract term. But a disjunctive denotation is impossible without an abstract connotation and Berkeley's whole argument merely plays into the hands of his opponents.

In the Introduction to the *Principles of Human Knowledge*, Berkeley is mainly concerned with refuting the arguments in support of ab-

5. *Introduction to the Principles*, 10.

6. *Principles*, 15.

stract ideas. The most powerful weapon in his armoury is that which shatters the 'generic image.' For an abstract idea to exist it should be possible for us to form a 'composite or generic image,'—an image which has no quality in particular and yet has all the qualities, which is 'all and none of these (qualities) at once.' And as it is manifestly impossible for the mind to entertain such an image, it is consequently impossible for it to frame an abstract idea. In such an argument not only do we detect the fallacious identification mentioned already, but also we find, as Fraser points out, that no account is taken of the intellectual relations necessarily embodied in concrete knowledge and without which experience could not cohere.

The root of the trouble is that Berkeley is constantly shifting his ground from the image to the meaning. In his youthful enthusiasm he was blind to the contradictions involved in his arguments. Later in life he appears to have realised his fault, for in the edition of '*Alciphron*' published just before his death the argument against abstract ideas is conspicuous by its absence.

We have so far dealt only with the Introduction. When from the Introduction we pass on to the *Principles*, we find that the very opening sentence of Part I is a striking example of Berkeley's identification of the *idea-logical* and the *idea-psychological*. If the expression '*Ideas*' is taken in the sense of *idea-logical*, as we normally and with justification should, then his statement 'it is evident to any one who takes a survey of the objects of human knowledge, that they are either ideas etc. ' is true. But if we interpret '*idea*' in the sense of *idea-psychological* then the contention of the opening paragraph is absolutely false.

A question might arise here as to why we should introduce an unnecessary confusion when the meaning is so plain. True; but when we go to the second paragraph we find Berkeley declaring that by '*idea*' he means the '*idea-psychological*.' 'The existence of an idea consists in being perceived.' In the fourth paragraph he says emphatically, 'For, what are the forementioned objects but the things we perceive by sense? and what do we perceive besides our own ideas or sensations? and is it not plainly repugnant that any one of these, or any combination of them, should exist unperceived?' Again in the seventh paragraph he declares, ' for to have an idea is all one as to perceive; that therefore wherein colour, figure, and the like qualities exist must perceive them.' The result of the stand which Berkeley takes in these paragraphs, is that his basic argument against the materialists—that thinghood is not something superadded to the qualities, but is merely the qualities organised into a unity—loses its cogency, because he does not distinguish between qualities and sensations.

The point that we have been attempting to drive home is further emphasised in the eighth paragraph wherein Berkeley is arguing against representationism. 'But, say you, though the ideas themselves do not exist without the mind, yet there may be things like them, whereof they are copies or resemblances ; which things exist without the mind in an unthinking substance.' Representationism avers that the mind knows only its ideas no doubt, but these ideas *represent* what is quite unlike the mind. But Berkeley points out that 'an idea can be like nothing but an Idea.' If this statement of his is to be interpreted aright, it is necessary to note that the *idea-logical* is very different from the *idea-psychological*. The *idea-logical*, the object of knowledge is the *real thing*, and the *idea-psychological* can represent it without being like it. But if we abolish the distinction between the *idea-logical* and the *idea-psychological* as Berkeley would have us abolish, then the argument loses its significance.

In the succeeding paragraphs (9-15) Berkeley is arguing against the existence of the so-called primary qualities independently of the mind. 'Let any one consider those arguments which are thought manifestly to prove that colours and tastes exist only in the mind, and he shall find they may with equal force be brought to prove the same thing of extension, figure and motion.'⁷ The argument from relativity, which is used by the scientist with such force against the objective existence of qualities which are perceived with a single sense, can, with equal force, be used against those that are apprehended by the mind through more senses than one. In using such an argument for disproving the objective existence of primary qualities Berkeley introduces a point which is of great importance to us. Dependence of a quality on the mind is proved by the fact of its 'being entirely relative and changing as the frame or position of the organs of sense varies.' A quality (size for example) changes with the change in the sense organ perceiving it. Yet we are able to identify it as the same quality belonging to a particular object, because through the varying *idea-psychological* the *idea-logical* persists informing us of the identity of the object presented in the ever changing image. And the *idea-logical* involves relations cognised by the mind. Not only does relation involve abstraction (denied by Berkeley), but it can be presented in a particular term and particular term alone. Now if the quality be identified with the sensation by which the quality is perceived, if the *idea-logical* be identified with the *idea-psychological*,

7. In the previous paragraph Berkeley had attempted to prove that simple introspection is enough to establish that ideas are inactive in themselves.

then there is no room for relations in the latter, and Berkeley's arguments can be easily turned against himself.

A very significant difficulty arising out of the unjustifiable identification of the *idea-logical* with the *idea-psychological* is manifest in the next section of the first part of Berkeley's *Principles*. *Thing* has been defined by our author as constituted by a group of ideas, and as an idea is merely a presentation (or *idea-psychological*) and is inactive, Berkeley has to explain how a significant unity of qualities is constituted out of inactive images, and what it is that produces and determines the order of change or succession in them. In the twenty-sixth paragraph of the *Principles* Berkeley says, 'We perceive a continual succession of ideas; some are anew excited, others are changed or totally disappear. There is therefore, some *cause* of these ideas, whereon they depend, and which produces and changes them. That this cause cannot be any quality or idea or combination of ideas, is clear from the preceding section.⁷ It must therefore be a *substance*; but it has been shown that there is no corporeal or material substance; it remains therefore that the cause of ideas is an incorporeal active substance or Spirit.' Berkeley gets out of the difficulty neatly by postulating 'Spirit' as the cause of ideas. But if he had recognised that an idea in consciousness is not a mere inactive presentation, but is the result of an active interpretation of the presented datum, then the path through the metaphysical maze which he is threading would have been much smoother.

The term 'notion' has a very peculiar connotation in Berkeley, and the distinction between 'Idea' and 'notion' is of first-rate importance to his system. "... we have some *notion* of soul, spirit, and the operations of the mind, such as willing, loving, hating—" ⁸ "we may be said to have some knowledge or *notion* of our own minds, of spirits and active beings; whereof in a strict sense we have not *ideas*. In like manner, we know and have a *notion* of relations between things or ideas; which relations are distinct from the ideas or things related, inasmuch as the latter may be perceived by us without our perceiving the former."⁹ "We may not, I think, strictly be said to have an *idea* of an active being, or of an action; although we may be said to have a *notion* of them. ... It is also to be remarked that all *relations* including an act of mind, we cannot so properly be said to have an

8. *Principles*, 27.

9. *Ibid*, 89.

idea, but rather a *notion* of the relations and habitudes between things." ¹⁰

It is significant that these sentences which define the connotation of "notion" are not to be found in the first edition of the *Principles*. By the time the second edition was published, Berkeley had come to see clearly the implications of his stand-point, and introduced the definition of "notion" and drew the distinction between "idea" and "notion" to make his position plain. In the strictest sense "notion" is the apprehension of the Ego. It also signifies the intelligence of relations. Berkeley is now coming to realise the importance of the part played by the idea-psychological in the understanding. Besides, and this is the point to which we wish to draw special attention, in the fifth and twenty-fifth paragraphs Berkeley uses the expression "notion" in rather a vague sense. "Light and colours, heat and cold, extension and figures—in a word things we see and feel—what are they but so many sensations, *notions*, ideas or impressions on the sense?" ¹¹ "All our ideas, sensations, *notions*, or the things we perceive, by whatsoever names they may be distinguished, are visibly inactive." ¹² Fraser holds that notions and ideas mean the same in these contexts. Our contention is that even while preparing his manuscripts for the first edition Berkeley was aware of the apprehension of 'relations' by the mind and that he could not but introduce a separate word to indicate his meaning. That he speaks of extension and figure is sufficient indication of the fact that he had a suspicion at the back of his mind of the rôle of the *idea-logical* in the faculty of understanding.

In conclusion, we hold that the entire structure of Berkeley's metaphysics (including his doctrine of abstract ideas and the dictum *esse is percipi*) is based upon a false foundation—the unjustifiable identification of the *idea-logical* with the *idea-psychological*—. If he had only drawn the distinction clearly between image and meaning he could have presented us with an idealism purged of the several defects besetting the type of subjective idealism championed by him.

10. *Ibid*, 142.

11 and 12. These sentences occur in the first edition of the *Principles* also.

The Problem of Rural Indebtedness

By

B. V. NARAYANASWAMI NAIDU AND V. VENKATARAMAN
(Annamalai University)

I

THE PRESENT CONDITION OF AGRICULTURISTS.

The low standard of living to which the mass of India's population attain is one of the first things that strike a western visitor. Wants are few, diet is simple, climate is usually kind and a deep-rooted tradition tends to make the country content with things as they are. But the depth of the poverty, the pervading presence of which cannot escape notice, is not so easily realised.

—*Simon Commission Report.*

1. The ever present theme of Indian rural economy is the appalling poverty of the people. Economists and observers both foreign and Indian have testified to the growing poverty of the vast mass of India's population that lives and labours in their thousands in the villages of India. The Central Banking Enquiry Committee has estimated the average income of an agriculturist in British India at about Rs. 42 or a little over £ 3 a year. The Simon Commission note that if we compare this income with the average income per head in England (£ 95 in 1922) even allowing for the different standards of life the contrast is striking. This view is more than corroborated by statistical evidence.

2. The average income per head of the Indian Agriculturist can be arrived at by subtracting from the gross value of the produce the cost of cultivation, land revenue and payments of interest etc., and dividing it by the total number of persons dependent on land. The gross value of the crops of the Madras Presidency in 1928-29 has been estimated at about Rs. 165 crores. Out of this, cost of cultivation and revenue assessment would have consumed nearly Rs. 70 crores and Rs. 8 crores respectively. The volume of rural indebtedness was estimated at Rs. 150 crores. If interest payment at an average rate of 12% per annum which will amount to Rs. 18 crores is taken to have been paid, then, only Rs. 69 crores would have remained for the maintenance and other purposes of farmers. Taking income from other sources to have been Rs. 11 crores, the amount available for the forty millions of the rural popula-

tion for their living must be Rs. 80 crores. This shows a net income per head of Rs. 20 per annum. As prices have gone down nearly by 47% and the gross produce has not shown any signs of increase, the gross value of the crops in 1933-1934 would be Rs. 87.45 crores. The cost of production has not fallen in the wet areas so much as in the dry. Granting a reduction in the cost of cultivation of about Rs. 20 crores the present cost will be Rs. 50 crores. The revenue assessment is Rs. 7 crores. Taking it for granted that the debt remained stationary and no interest was paid during the period of depression, the amount at the disposal of the forty millions will be Rs. 30.45 crores or a per capita income of Rs. 7.6. No doubt this income is supplemented by the wages earned by the labourers. But even this cannot exceed an additional Rs. 5. per head.

3. It is clear, therefore, that the agricultural classes who form more than 70% of our population are exceedingly poor. The gloom of poverty is only deepened by the disheartening conditions under which they labour. The holding of the average cultivator in India is too small to enable him to live in comfort on its yield. Poor and illiterate, half fed and ill-clad the Indian peasant works at his fields with cattle even more famished than himself at tasks which have become mechanical by the custom of centuries. Even under the enlightened and benevolent government of the day he is too much sunk in troubles and sorrows to dream of improved methods of agriculture or scientific manuring. Hungry and famished almost all the days of the year he easily falls a prey to disease and even the toil of his weakened hands is not enough to save him from the ravages of droughts, floods and pests. What the mercy of nature spares the money-lender is ready to filch away. When compared to other countries the yield per acre in India is ludicrously low and little attention is paid to scientific manuring and improved methods of cultivation. The consequence is that the average cultivator still continues to live on an insufficiency of food which impairs his physical capacity for work and largely accounts for the high percentage of mortality in the country. The Central Banking Enquiry Committee says that "these conditions cannot be wholly ascribed to an undue increase in population and consequent pressure on land. Nor can the low productivity be justly ascribed to the inefficiency or ignorance of the Indian cultivator. The standard of inherited skill in husbandry of the Indian cultivator is high, but the farmers of other countries are undoubtedly in a position of greater advantage in as much as they are aided by the discoveries of scientific research made available to them by an enlightened state policy in regard to agriculture". As Darling points out in his book 'The Punjab Peasant in Prosperity and Debt', the amount spent on agriculture by the Central and Provincial Governments stands no comparison with that of

other countries. In 1924-1925 the Central and Provincial Governments in India spent Rs. 34 per thousand of population and Rs. 30 per thousand acres cultivated whereas in the United States of America the amount spent in 1919-1920 was Rs. 1,020 and Rs. 210, in the United Kingdom Rs. 960 and Rs. 1,380 in 1921, in Germany Rs. 945 and Rs. 705 in 1910 and in Italy Rs. 265 and Rs. 184 in 1925-1926.

4. The causes for this state of things have been gone into by the Committee appointed by the Madras Government to investigate into the "Economic conditions of the Agriculturists in certain Districts" and have been endorsed by the Central Banking Enquiry Committee with certain additional remarks. "(i) While population has increased extension of cultivation has not kept pace with it. (ii) No improvement in the condition of unemployment of agricultural labour has taken place. (iii) There is an increase in the fragmentation of holdings while the average area of holdings has gone down. (iv) The indebtedness of the agricultural population is heavy, hampers cultivation and reduces incomes. (v) Various causes bring about a rapid change of hands of lands and ryots are unable to repay their debts except by the sale of their lands. (vi) The margins available for the maintenance of the cultivator's family after paying the assessments, are either inadequate or nil. While a few rich people get richer, and a small number remain on the margin of subsistence, the majority are running into debt and losing their hold on land which is frequently changing hands. (vii) The system of Land Revenue is based too much on *averages*. The inelasticity of the system leads to low production and indebtedness. It is antiquated, and is not in keeping with the trend of land revenue policy in civilised countries."

Land Revenue in India is much heavier in its incidence than other taxes. In the recent years of depression the incidence of taxation has been heavier and the poverty of the people greater as is shown by the working of the Revenue Department. The frequent resort to coercive measures for the recovery of its due in recent years is an index of the growing distress of the people. The following are the figures for South Arcot District:—

Year.	Notice of demand.	Notice of distraint or attachment.	Sale. notices.	Sales : No. of defaulters.
1927-28	18,480	16,145	13,008	1,407
1928-29	19,933	13,299	12,468	592
1929-30	21,523	10,538	8,907	932
1930-31	36,127	27,314	16,702	1,092
1931-32	36,046	23,885	19,434	3,391

There has been a noticeable increase in the number of coercive processes issued for the realisation of the revenue demand. Whereas in 1927-1928 the number of demand notices, of distraint and sale notices were 18,480, 16,145, and 13,008 respectively, in 1931-1932 they were 36,046, 23,885, and 19,434. One can very well realise the rigour and the stringency with which the authorities enforced their claims at a time when the ryots were hard pressed for ready cash. The number of defaulters whose property was sold in the last two years was 1,082 and 3,391. The percentage of attachments of real property was on the increase. From 6.6% in Fasli 1325 it has increased to 16.6% in Fasli 1341. In Fasli 1341 the amount of arrears was Rs. 16,420. The fact that immovable property to the value of Rs. 1,25,579 was sold for Rs. 12,319 to realise the arrears in Revenue of Rs. 16,420 is proof positive of the utter helplessness of the ryots who could not but let slip their lands as they had no means of finding the necessary money where-with to pay their dues. No ryot, if he could help it would allow himself to be deprived of his land for a fraction of its value. So proverbially attached is the Indian ryot to land that he would have parted with anything if he could only retain his land.

5. The Central Banking Enquiry Committee hold that this state of things is the resultant of a few more contributory causes. Not least important among them are the comparatively small spread of literacy, extravagance of social habits, lack of opportunities for fuller life and for initiative and enterprise and absence of definite and large scale action by Government or people for the uplift and betterment of the agricultural classes. The steep fall in prices of agricultural produce in recent years (about 50%) has only served to intensify the suffering and distress of the peasants.

6. Another handicap which the Indian agriculturist labours under is the absence of large scale selling organisations and lack of marketing facilities. Without any organisation to support him and with next to no credit the Indian agriculturist is unable to get a fair price when he deals with the giant buying organisations of European nations. Illiterate and single-handed the Indian cultivator is unable to stand up to foreign capitalists and secure a square deal. The disorganised condition of the cultivators which in certain cases is accentuated by the presence of powerful organisations of buyers, and the lack of proper credit facilities enabling them to hold on to their crops in times of plenty, often prevent them in India from obtaining a fair price for their produce.

7. The amelioration of the condition of the agriculturist cannot be effected by the pursuit of any single method. It is wrong to suppose that in an easily obtainable credit alone lies the panacea for all the ills, from

which the Indian agriculturist suffers to-day. A complete programme of rural development must aim at measures that would make agriculture a paying industry. At present, 'in India agriculture is, with most cultivators, with uneconomic holdings more a mode of living than a business.' The following words of the Royal Commission on agriculture hold good even to-day : 'To a very great extent the cultivator in India labours not for profit nor for a net return but for subsistence.' The existing impediments to efficient production must be removed. The fiscal organisation of the country should be so arranged as to benefit agriculture particularly by means of subsidies and tariffs. The lightening of the burden of taxation and the economic organisation of the industry and in particular, development among farmers of better methods of purchase and sale and co-operative insurance will go a long way to better their condition. Not the least important of all is the organisation of the transport of the country with due regard to the interests of agriculture.

II.

THE PROBLEM OF RURAL INDEBTEDNESS.

(With Special reference to the Madras Presidency)

1. The central fact of the Indian economic situation is the poverty of the agriculturist, and the extent of his indebtedness is an unmistakable index of his growing penury. The spectre of debt has grown very much in proportions during recent years of a world-wide slump in trade and an unexampled fall in the price of agricultural produce and no scheme for bringing back prosperity to agriculture can afford to neglect the growing incubus of debt that lies heavy on the Indian peasant. A few years ago the Central Banking Enquiry Committee estimated the volume of indebtedness for the whole of India at Rs. 900 crores and for Madras at Rs. 150 crores. It is beyond doubt that the volume of debt could not have gone down during these years of depression. As the debt position of Madras in 1929 was estimated at Rs. 150 crores, the interest charge on an average at 12% per annum would come to Rs. 18 crores. Since, during the period of depression, the cultivators were struggling hard to make both ends meet, interest payments or repayments of capital—if at all there were any—would have been very slight. On the other hand fresh borrowings are to be found as a result of agriculture becoming completely a non-paying concern. The repayments of the principal and the fresh borrowings, even according to the most modest estimates, could be taken to balance each other. So the volume of debt should have increased at least to the extent of the non-repaid portion of the interest charges. For the past five years the interest charges would amount to Rs. 90 crores of which, even allowing

Rs. 40 crores for the repaid portion, at least Rs. 50 crores could not have been repaid. So even according to very modest estimates the present volume of indebtedness of our province would come to about Rs. 200 crores. With the 47% fall in prices the real burden would be nearly Rs. 300 crores. (The fall in prices has affected the pre-depression debt only). Thus we are able to see that the burden of indebtedness to-day is roughly two times heavier than what it was in 1928-29. If this state of affairs is permitted to continue for some more years the Indian agriculturist will be completely ruined. Since agriculturists form more than 70% of the total population the miserable position of the agriculturist will react on the prosperity of the nation as a whole.

2. Having regard to the vital importance of the problem to all schemes of amelioration it is necessary to gauge its origin and extent before turning one's attention to the methods of eradicating it. Sir Frederick Nicholson summarises thus with approval the findings in regard to the causes of agricultural indebtedness of the Commission appointed to investigate the causes of the agrarian riots in the Deccan in 1875:—

“First, poverty with unproductive soil, precarious climate and irregularity of income,

Second, ignorance and improvidence,

Third, extravagance,

Fourth, ancestral debt,

Fifth, expansion of credit,

Sixth, increase of population without corresponding increase of return,

Seventh, facilities for borrowing owing to influence of money-lenders,

Eighth, the limitation laws as leading to renewals on usurious terms including compound interest and,

Ninth, revenue system of a fixed demand.”

The root cause of the problem is not so much the extravagance of the expenditure as the extreme insufficiency of income. This state of things is due to the smallness of holdings, inefficient methods of production and marketing, frequent failure of crops and loss of cattle. There is barely an acre per head of the total agricultural population; for there are only $4\frac{1}{2}$ acres for every cultivating family of about five or six members on an average. As most of the Indian agriculturists are, “born in debt, live in debt, die in debt and bequeath debt,” the weight of ancestral debt is too much. Whether the ryot has got property enough to pay off the ancestral debt or not, he feels that he is bound to repay all his ancestral

debts. The idea of escaping payment of ones debts by declaring oneself insolvent is repugnant to peasant sentiment. The agriculturist has a deep rooted feeling that money once borrowed must be repaid even at the cost of his own existence. For example while conducting personal enquiries in certain villages we met some agricultural labourers who were involved very deeply in debt. When the suggestion of renouncing their claims and seeking some other job somewhere else was made they emphatically replied that on no account their conscience would permit them to do that ; for, they feared damnation in the other world.

3. A close observation of the working of the credit machinery in rural areas reveals it to be remorseless in its operation and devastating in its result. Usually some man who has command of ready cash starts lending it in small amounts to the agriculturists relying on their position in the village and their general standing. The rate of interest varies from 12 to 24% and even small sums tend to mount up in the course of a few years since the interest is often added on to the capital every year. When the amount has thus gone up the money-lender gets it secured on the peasant's property. The peasant always lives on the margin of starvation and is able to eke out a livelihood only after incredible labours. If the harvest is bad the only way in which he can continue is by borrowing. It is a fallacy to think that to the average peasant there is a surplus in a prosperous year which he can utilise in a year of bad harvest. Seasonal fluctuations and scarcity so frequent in India only tend to increase borrowings and eliminate all chances of repayment by the peasant of his debt. So the lender gets a sale of the peasant's lands and gradually turns into a ryot money-lender as a result of his getting lands in return for the amount due to him. In the case of landless men to whom he advances money he secures an agreement by which the peasants work for him till the amount they have borrowed is returned with interest. When the labourers struggle hard even for their maintenance the chances of repaying the loan are small indeed. This debt is bequeathed from father to son and slowly the whole family sinks into a torpor of semi-slavery. Helpless and hopeless they are at the mercy of the ryot money-lender for whom they work more and are paid less.

4. The average peasant's income is meagre because of the extreme smallness of holdings, the adoption of primitive methods of agriculture, the heavy burden of land revenue and above all the difficulties of a period of great economic depression. The agriculturist who is always leading a miserable life would try to lead a better life at least in one or two years when he gets a tolerably good yield. We cannot call this the extravagance of the peasants alone. It is only a part of human nature as a whole. In addition to the abovementioned factors the frequent loss of

cattle also goes to swell the debts of the peasant. Even more important is the lack of proper marketing facilities. 'In the first place his holding is often so small that, after keeping back what is required for consumption and for seed there does not remain enough of any particular product to make it worth while to take it to a distance. In many parts of the country the transport conditions act as a further deterrant. If, as often, the cultivator has to drive his bullocks for miles across cultivated land and along rough tracks to reach a metalled road he will prefer to sell his produce in the village market. Even when he can more easily reach the wholesale market he is out of his element. He is liable to find even the weights and measures confusing and still more so the numerous exactions and deductions of middlemen. On the whole the ordinary peasant cultivator finds that it suits him better to retail his produce on the village market where he can obtain his own simple requirements in exchange. If he has surplus quantities of wheat, rice, oilseeds, etc his need of immediate cash will usually make it better worth his while to dispose of them, even at a discount, to the itinerant traders who buy up such surpluses from village to village and finally take the produce to the wholesale market where they know how to make their profit.' (Ref. Agricultural situation in 1932-33 of the International Institute of Agriculture.) The lack of other sources of income plays no mean part in making the income of the agriculturist very small.

5. Next in order of the causes that contribute to agricultural indebtedness are 'ignorance and improvidence'. Even the Central Banking Enquiry Committee has recognised the higher standard of inherited skill in husbandry of the Indian cultivators. But the number of troubles and sorrows born of ignorance and illiteracy is legion. Nothing will minimise the exactions of money-lenders and prevent perpetual exploitation of the people by minor tyrants and swindlers than the spread of literacy. There cannot be even the shadow of a doubt that with the proper kind of education the economic condition of the people will be greatly improved. The Indian cultivator is too often accused of extravagance. Much emphasis has been laid on the wastage of money on ceremonials and festivals. Normally marriages and other festive occasions come only at long intervals. These are the only times in which the cultivator can have some enjoyment. The peasant who is in most cases forced to lead a hand to mouth existence throughout his life, wants at least some diversions. He is even prepared to sacrifice his freedom for the sake of that enjoyment which breaks the dull monotony of his existence. Though there are some cases in which much of extravagance is present, it would not be correct to say that the cultivators in general are extravagant. The burden of this portion of the debt is not much when compared with others. The reduction of expenses on marriage

and other festive items by the cultivators during the period of depression goes to prove that they are not indifferent to the realities. They try all available means to minimise their expenses. Thus we see that much emphasis need not be laid on this cause alone.

6. Another important factor which contributes to the volume of indebtedness is the want of cheap credit facilities. "If the genesis of debt is in insufficient income and unexpected happenings its rapid growth is largely due to the accumulation of interest." Mortgage debts, in our presidency, carry on an average not more than 12% interest. But interest rates on unsecured loans vary between 6% and 24%, though there may be stray cases of higher interest rates. The average interest rate comes to about 18%. The Chettiar Bankers and Marwaris in some places, demand a nominally low rate; but when calculated the rates will come to 36 to 40%. In brief the interest charges cover more than 20% of the total gross production of the presidency. The frequent renewals of notes with interest added to them lead to the quick increase of the volume of indebtedness. The demand of compound interest in many cases still further aggravates the situation. To point out an example, there was a case where the amount borrowed was Rs. 40. In a period of 20 years the debtor was made to pay Rs. 360 for which he had to dispose of his only house. Thus the evil effects of the higher rates of interest and the exaction of compound interest should attract, first, the attention of any one who studies the condition of rural India.

7. The inadequacy of easy credit is also a very important factor which has gone to swell up the volume of rural indebtedness in this country. It has long been recognised that the short term and long term credit needs of the agriculturist are not sufficiently met by existing agencies. In spite of the development of Co-operative Societies and inspite of the opening of a hundred new branches of the Imperial Bank of India the modern banking system has made little headway in India. The commercial Banks and the Imperial Bank have only touched the fringe of the problem of Indian credit. The Central Land Mortgage Bank of our Presidency had on 30-6-1934, 190 individual members and 63 primary banks affiliated to it. In 1925 there were only two registered Land Mortgage Banks while in June 1927 there were ten. In spite of the rapid strides which this movement has taken in recent years, they are not able to solve the problem of long term credit fully. The Central Land Mortgage Bank has till 30-6-1934 disbursed loans to the extent of Rs. 35 lakhs only, or, in other words the Land Mortgage Banks have taken over only 0.175% of the total rural debt which is estimated at Rs. 200 crores. This is no more than a mere drop in the ocean. Hence more than 90% of rural credit is in the hands of the indigenous banker and the ryot money-lender. The very high rates of interest charged by

these agencies, the very insignificant part that is played by the commercial banks and the Imperial Bank and the negligibly inferior position taken by the Land Mortgage Banks in supplying the long term credit needs of the agriculturists have all tended to a restriction of credit for the Indian cultivator.

8. The great volume of indebtedness whose evil effects have been intensified by the above causes tells heavily on the agriculturist. The menace of indebtedness brings in much economic, social and moral consequences. Debts lead directly to agricultural inefficiency. A cultivator who is deeply immersed in debt is indifferent to and impotent for using improved methods of cultivation. The incentive to work intensively is withdrawn. Moreover, as already pointed out, debt prevents the cultivator from securing proper prices for his produce. Pressed by the creditors who more often have got a share in the marketing of the produce, the debtors are forced to sell their crops without waiting for suitable prices. Thus debt forces the cultivator to receive a lower rate of income than his due. This reduced income which is still further diminished by the payment of interest or repayment of principal, leads to the inefficiency of the cultivator.

9. Another effect of indebtedness is loss of property. Unless exceptional circumstances intervene, mortgages generally end in sale. In this way land is frequently changing hands. The view that the frequent change of land-ownership is beneficial cannot be endorsed, at least as regards our Presidency. Whenever land changes hands it generally goes into the hands of a rich mirasdar or an absentee landlord or a money-lender. This leads to the evils of absentee landlordism and loss to the ranks of peasant proprietors. As Arthur Young puts it, "the magic of private property turns sand into gold." So the loss of peasant proprietors is a serious menace to be tackled with immediately. In 1921, for every thousand ordinary cultivators, there were only 291 farm servants and field labourers, whereas in 1931 the proportion of labourers was found to have increased to 407 for every thousand cultivators.

10. The worst evil of indebtedness is that it leads in many cases to servitude. The Pannaiyal system of the Madras Presidency, whatever may be its virtue has got its own defects. A labourer who borrows a small sum, say Rs. 50, to celebrate a marriage or a funeral, has in turn to work for the lender, receiving a bare pittance for his livelihood. He can never be expected to save up the amount needed and so the transaction becomes an indenture for life and in most cases for generations too. Thus on all sides the burden of indebtedness weighs heavily on the cultivators and produces many harmful results. It is a cancer which eats into the vitals of the agricultural population, nay the population of India as a whole.

III

A STUDY OF FIFTY FAMILY BUDGETS.

1. The correctness of the general statements made in the previous chapters is conclusively proved by the result of an investigation which the present writers undertook in January 1935. An intensive study was made of fifty family budgets belonging to the Sivapuri and Gavarpet villages of the Chidambaram Taluk.

2. The total strength of these families is 245. Of this only four families are completely free from debt. The total amount of debts of the remaining forty-six families is Rs. 44,129-8-0. This works out on an average to a debt of Rs. 882-6-0. per family of five and to a debt per capita of Rs. 180. The position of debt according to the number of years for which it has been due is as follows:—

One year old debt	Rs. 10,345	forming	23.44%	of the whole
Two	4,625	"	10.48%	"
Three	8,100	"	18.35%	"
Four	640	"	1.46%	"
Five	800	"	1.81%	"
Six	4,219	"	9.56%	"
Seven	25	"	.06%	"
Eight	2,900	"	6.57%	"
Ten	1,950	"	4.42%	"
Eleven	300	"	0.68%	"
Twelve	100	"	0.23%	"
Fifteen	4,100	"	9.29%	"

The current interest due is Rs. 6,025.5—13.65%.

The amount of debt incurred according to each cause and the percentage which that bears to the whole is given below:—

Causes.	Amount. of Rs.	Percentage.
Maintenance	4,925	11.16
Purchase of lands	9,900	22.43
Agricultural improvements	2,960	6.71
Purchases of cattle	460	1.04
Land Revenue	690	1.56
Liquidation of old debts	10,450	23.68
Marriage and Funeral	3,705	8.04
Education	2,700	6.12
Interest payments	850	1.93
Medical	169	0.39
Current interest due	6,025	12.65
Miscellaneous	1,295	2.93

3. Let us now try to analyse the nature of the debts as revealed by the above figures. Among the causes that lead to borrowing, agricultural activities naturally take the foremost place covering about 31.74%. Ancestral debt comes next in importance with 23.68%. The third rank is taken up by the exorbitant interest charges which come to 15.58%. They even outstrip in extent the debts that the cultivators are forced to contract for preserving even their present meagre standard of living. While thus the interest charges due to-day form not an unimportant portion of the debt burden, it has also to be borne in mind that a good portion of the interest must have been paid as they came due at least in the years before the depression. Thus it is clear that the burden of interest charges is pressing heavily on the cultivators. It is impossible to improve the condition of the agriculturist without a relaxation of this disproportionate interest burden. Next come marriage and funeral expenses a factor which has been over-emphasised for a long time, since it covers only 8.40% of the whole debt. It has long been the fashion to condemn the Indian agriculturists on the score that they have been incurring much debt on festive occasions. When one sees the real position it is easy to judge that the marriage and other ceremonial expenses entail only a less amount of debt than other causes. It is high time to change our opinion and to go into the real problem which affects the cultivators most. Insufficiency of income coupled with too dear a credit is steadily driving the cultivator to an impossible position. The amount represented as having been spent on education is that incurred by only one family. The statement made by the Central Banking Enquiry Committee that "to a very great extent the cultivator in India labours not for a profit nor for a net return but for subsistence" has been more than proved by the study of the above budgets. An analysis of the borrowing will make clear that the agriculturists' income is insufficient even for carrying on the work of cultivation not to speak of the liquidation of debts, interest payments and other charges.

4. The figures given above throw in addition an interesting side-light on the effect of the recent economic depression on the agricultural classes. The sufferings of the agriculturists are clearly indicated by the steady growth of the debt burden during the period of depression (1930-34). Debts incurred during this period account for 64.54% of the total debts. If to these are added the current interest charges we see that the real debt burden of the depression period is 78.19% of the total debts.

5. Our investigation gave us also an inkling into the real nature of the rural credit system that now holds the field. Nominally the ratio of interest charged varies between 6% and 24%. But in reality the rate is

much higher since the notes and bonds are frequently renewed when the interest is added to the principal and thus a kind of compound interest is collected. We also found that the landless labourers were much more hard pressed by the alien banker than by the ryot money-lenders who follow the Pannaiyal system. In Sivapuri there is a banker who has come to own a large amount of land simply because of his money dealings. This banker has given on loan very small sums of money to the labourers at a nominal charge of 24%. The labourers are bound to work on the tobacco fields owned by the banker at a fixed rate of monthly wages for a period not exceeding six months. During the rest of the year they seek employment outside and return to the tobacco fields during the next season. From a monthly wage of Rs. 7 or 8 a certain percentage is deducted for interest charges. The remaining amount is given partly in cash and partly in kind of an inferior sort. As interest charges will be deducted only for six months the rest of them are added to the capital at the beginning of the next year and a fresh bond is got for the total amount. Thus the debt increases by leaps and bounds year after year while the labourer becomes a perpetual slave of the banker. When once a free labourer begins to borrow even a small sum of Rs. 50 from the banker his fate is sealed. This is merely an exploitation of the needy and ignorant agricultural labourer. On the other hand the labourers under ryot landlords are in a better position. Though here also there exists a sort of slavery yet the labourers do not feel their position so much. The landlord employs him throughout the year, though with a small remuneration. Constancy of employment is thus afforded. Further the landlord does not generally charge any interest on the amount which he has lent to his labourers so long as they serve under him. Besides, the gratuities which the poor labourer receives from his master are of a substantial amount. Thus the landless agricultural labourers feel the burden of a debt less in the case of ryot-masters than in the case of bankers. In short the change of ownership of land from peasant cultivators to the non-agricultural population serves only to aggravate the burden of indebtedness of the landless agricultural labourers.

IV.

LEGISLATION IN FOREIGN COUNTRIES AND IN INDIA.

1. A study of the attempts made to solve the problem of agricultural debts in other countries and in our own country in the past would be a guidance for the future. In this chapter a brief survey of the legislative measures undertaken in various countries with a view to bettering the conditions of the cultivator is attempted specially bearing in

mind the question of rural indebtedness. Before proceeding to individual countries we can generalise that in spite of its imposing heavy sacrifices on the state, considering the favourable influence which it would have on the national economy, in almost all countries legislation has been carried in one form or other, "aiming at the strengthening of the material condition of the farmer by extending credit, by fiscal facilities, by measures for the relief of indebtedness, by the artificial maintenance of the price of the principal agricultural products above the level of prices on the free market and by the encouragement of export."

2. In Bulgaria, by the Law of 1933 relief in regard to the payment of debts contracted upto 1931 is given. Relief is granted both by the credit institutions dependent on the State and the private banks and by the State itself, through the departments and through the communes in the case of debts of a fiscal nature. Broadly viewing, the relief consists in the postponement of payments for a period up to 10 years or, in exceptional cases up to 15 years, the reduction of interest rate to 6%, the postponement of payments for the amortisation of debts contracted not more than two years before, and most important of all the reduction of all the debts in proportion to their increase as the result of excessive rates of interest.

3. Czechoslovakia also adopts a similar method. By the Decree of 29th July 1933 the property of a person to whom agriculture is the sole means of livelihood cannot be placed in a state of bankruptcy on the application of a creditor except in certain special cases expressly determined by the Decree.

4. The Government of Denmark passed a law in 1933 which facilitates the conversion of loans granted by mortgage credit societies to a lower rate of interest. In order to make this conversion possible and to provide for increased fluidity as well as normal credit grants and a lower rate of interest, a fund amounting to 200 million crowns was credited in May 1933 by the Law establishing a Crisis Fund.

5. The Estonian Government undertook the following measures. By the Law of 10th November 1932 the rate of interest on loans granted by the Land Bank was reduced to $2\frac{1}{2}\%$. A Law of May 1933 made it possible to obtain private loans transferred compulsorily into long term loans, up to a total amount of 6 millions of Estonian Crowns, (i) when the farmer in question has up to then cultivated his lands rationally, (ii) when the indebtedness was incurred before 1932 and (iii) when the total amounts of the debts is neither less than 20% below nor more than 100% above the total amount of the land value of the farm as estimated by the

Land Bank. These private loans are paid to the private creditors in equal parts out of the Colonisation Fund in the course of ten years, while the farmers, on their part, have to repay their loans to the Land Banks in the course of thirty years.

6. Debt relief measures in French Indo China, have as their object the lightening of debts of agriculture and take the form of mortgage loans at a low rate of interest and of the creation of a colonisation office the mission of which is to buy up property sold by judicial process and to give to honest debtors hire-purchase agreements to enable them to recover by their labour the ownership of their holdings.

7. In Germany a comprehensive scheme is working. To prevent the heavily indebted farmers from throwing on the market crops at ruinous prices, financing of a suitable nature was aimed at. Under the auspices of the Reich Bank loans on the pledge of grains were facilitated and rendered possible, and also to a large extent, by the establishment of legal and commercial grades for cereals. Recently many measures have been passed including "the establishment of a procedure of mediation for the settlement of debts in agriculture, the development and unification of the protection against distraint and of the protection of the tenant farmers, the facilities given for the payment of interest on agricultural mortgage debts, and lastly the law of June 1933 on the settlement of agricultural indebtedness with a possibility of reducing the debts and lowering the rate of interest."

8. The temporary suspension of the forced sale of property of agricultural debtors was permitted by the Government of Greece. All agricultural debts were compulsorily listed. All of them due both to the State and to the private individuals were reduced by 30 to 50%. Easy repayment of debts was facilitated by the dues being spread over a longer period.

9. In Hungary in order that the result of the productive work of the farmers may not be destroyed by distraint and that the farmers may not easily be dispossessed of their lands as a result of forced sales by auction, the Government granted to the farmers a postponement of four months during which the measures for the recovery of their debts are subject to a certain limitation. Another Decree of 1932 provides for the prolongation by a year of the extension of time granted to farmers whose capacity has grown less, i.e., practically all the farmers. During this period provided the farmer pays the current interest the annual amortisation charges that have become due and the current taxes no further costs of proceedings, or of execution can be charged against him. No

application can be made for the sale by auction of his lands. Moreover the interest payable by farmers on mortgage loans, whatever may be the extent of their indebtedness, is reduced from $7\frac{1}{2}\%$ or 7% to 5% . Measures have also been taken to lighten the charges on short term loans. At the request of the Minister of Finance the Financial Institutions have declared themselves to be disposed, on certain conditions to remit 25% of arrears of interest; for small land owners they would even remit as much as 50% . A general reduction of the rate of interest on all agricultural loans was made.

10. The land credit institutions in Italy are authorised to allow borrowers who are in arrears in the payment of not more than four half-yearly instalments in respect of loans exclusively or mainly guaranteed by rural properties an extension of the time not exceeding twenty half-yearly instalments. The agricultural consortia, whose credits are frozen are put on a sound basis.

11. In Lithunia the rate of interest on mortgage in 1933 was reduced from 7% to $5\frac{1}{2}\%$. The sale by auction of real property is forbidden if the price offered does not reach 50% of the value.

12. The most comprehensive scheme was adopted in Poland. Measures adopted by the Polish Government took three forms. The first took the form of a defence of the home agricultural market against a too sharp fall in prices of agricultural products, a fall which might have completely disorganised the market. To achieve this, resort was made to export bounties and import duties. Secondly reduction of the cost of agricultural production and organisation of agriculture in a better manner were aimed at. To this end the burden of the state and local taxes was lightened and railway freights for the transport of certain agricultural products were lowered. The Government is intervening actively in all branches of agricultural production and is endeavouring by legislative rules and timely financial aid to increase this production. Thirdly, the Government undertook some measures of a financial character. A substantial modification or provisional relaxation of the prescriptions in regard to distraint for the recovery of sums due by the farmer was allowed. By a law dated 20th December 1932 the conversion of long term loans was made compulsory. The rate of interest on agricultural loans and on the bonds issued in respect of such loans was lowered to $4\frac{1}{2}\%$ and the period of repayment was fixed at 55 years, from the date of conversion no instalment of repayment being payable for a period of three years. To deal with the short term debts contracted by the farmers with private individuals Arbitration Offices were set up which were authorised to:—

- (a) reduce the interest to which the creditor is entitled to $4\frac{1}{2}\%$ annually;
 - (b) spread the payment of debts over a period of 7 to 12 years;
 - (c) suspend the repayment of the capital for a period not exceeding two years;
 - (d) carry the reduction of the credit to the sums exacted in excess by way of interest or in any form whatever;
 - (e) reduce rents;
 - (f) in certain cases, annul a lease before the expiry of the term.
- These officers are further authorised to pronounce their verdicts without taking into consideration whether the matter has previously been judged by a Court of Justice.

13. Coming to our country, the Government both Central and Local and some States, have tried to adopt some measures for agricultural relief. But they have not solved the problem to a large extent. The co-operative movement initiated by the Government has not yet taken deep roots. Debt Conciliation Boards have been appointed in some provinces and in the Bhavnagar State. In Bhavnagar, a majority of ryots and sowcars of the Mahal must apply jointly if a Conciliation Board is to be set up; since most of the Mahals have asked for it, it is clear that the scheme is popular with the sowcars as well. In the Central Province, the recent Act authorises the Government to set up Conciliation Boards in every district but the concurrence of the creditors to whom 40% of the debts are due is necessary if the case of a debtor is to be considered by the Board. Nor is the award unconditionally binding on the parties. When settlement is obstructed by the obduracy of the debtor or the creditor, the Board may issue a certificate stating who in their opinion is the unreasonable party. The creditor may then resort to the ordinary courts, but he will not then get the costs of his suits, if he is an unreasonable party, and the rate of interest from the date of the certificate will only be 6% per annum.

14. In the same State a scheme of debt redemption has been put through. The liquidation committee is authorised to write off any debt which is more than three times the land revenue assessment. The Government would then advance the compounded amount from the State's share of the produce of each khedut, the lands being held on the Bhagbhatai system. The land revenue and the takkavi advances are first deducted from the State's share and the balance would go to repay the State's advances to the sowcar. Such a scheme of debt redemption has already been carried out in 2/3 of the State which involved the settle-

ment of a debt of about Rs. 60 lakhs. On the whole the liquidation Committee has reduced the burden of debt by nearly three-fourths.

15. Though a Central Land Mortgage Bank was formed in 1929 in the Madras Presidency it has not yet dealt with even 0.2% of the total indebtedness in spite of the increasing number of primary Land Mortgage Banks (63 in 1934). Recently the Central Government has turned to the vital problem of agricultural relief. Though a number of marketing officers have been appointed, the number is not equal to the task. The work done so far is not satisfactory. We have yet to see the full operation of the rural section of the Reserve Bank in accordance with the suggestions of Mr. Darling.

16. An analysis of the methods employed by other countries to meet the problem of rural debt reveals clearly that the chief directions in which action has been taken by the State are reduction of rates of interest, scaling down of debts, liberalising the conditions of repayment, provision of greater credit and even in cases of default minimising and circumscribing the losses due to judicial process by methods such as the institution of colonisation offices to buy up property sold by judicial process and to give it back to honest debtors on a hire purchase agreement, and the creation of Debt Conciliation Boards facilitating settlement without recourse to law courts as well as postponement of sales in order to give time to the debtor to secure the credit he needs. Some have even tried to maintain an artificial price level by the aid of bounties and tariffs. The State has also tried to diminish the cost of production by the organisation of agriculture, by the reduction of taxes and railway freights and sometimes even by the reduction of rents and the cancelling of leases. At the same time production was sought to be stimulated by financial aid at the right moment.

V.

RECOMMENDATIONS.

An effective solution of this problem must depend therefore, on the simultaneous adoption of both preventive and curative measures, the one being the complement of the other. One without the other would be of no use. So a comprehensive scheme of debt relief must include both measures for the removal of the present debt burden and measures for preventing agriculturists from falling victims to indebtedness in the future. Unless there is a co-ordinated scheme of both curative and preventive measures it is beyond any doubt, that no good is going to accrue. Money spent in stray and haphazard measures is a mere waste. Though

it may seem to give relief for the time being yet the position will become worse in a short time.

The crux of the problem is the insufficiency of income of the agriculturists. So every attempt should be made to increase the income of the agriculturists. Besides, early measures should be adopted to lighten the present debt burden. When we discuss the curative measures it would be possible to see the various ways and means of lightening the debt burden. Now let us confine our attention to the other side of the question. Every effort is to be made to provide cheap credit facilities, to reduce the cost of cultivation and to enable the cultivator to receive a remunerative price for his produce.

Under the first item of providing cheap credit facilities the first thing that attracts one's attention is the question of fair interest. Although it is possible to get loans at cheaper rates in our province than in many others yet the real interest rates become high when one takes into consideration the malpractices resorted to by the creditors and the exaction of compound interest. A high premium has been put on the state of illiteracy of the rural population. An analysis of the present debt position will lead us to conclude that not less than 20% of the present debt burden can be attributed to interest charges. There are cases in the villages, though stray ones, of demanding two annas per rupee per mensem i.e., 150% per annum. So what is wanted is a legislative or administrative measure enforcing a general reduction in the rates to be charged, fixing the maximum for bonds, notes and other unsecured debts at 12% and that for mortgages and other secured debts at 9%. In abnormal years the rates may be allowed to go even lower. At the same time compound interest should not be allowed. The total interest charges must not be allowed to go above a certain percentage of the principal.

The effective lowering of interest rates and checking of malpractices can be done as follows. No legal action on any debt shall be allowed unless the debt claims have been registered in either of the following ways. In the case of secured debts there is a registration taking place in the Sub-Registrar's Office. Registration shall be allowed only after the Registrar satisfies himself that the rate of interest charged and other conditions do not contravene the legal limit and conditions. In the case of unsecured loans which generally bear an anna stamp and take the form of promissory notes something can be done to ascertain the magnitude of the debt position and for checking the interest rates and malpractices. Provision should be made for all money transactions to be registered before the Village Munsiff. The Village Munsiff should have

a registration account in which he may keep a detailed account of the money transactions. The interest rate and other conditions of borrowing must be thoroughly scrutinised before the officer registers the debt. No legal action on any debt which is unregistered shall be allowed. The registration charges may be two annas per hundred or two annas for all amounts. Before registering, just as all the promissory notes bear an anna revenue stamp so the registration fees also can be paid in the form of revenue stamps attached to the note. The reason why the Village Munsiff is chosen, is that generally Village Munsiffs are influential and responsible persons of the village. They are already remunerated by the Government. On the other hand, they have got heavy work only during the kist collection season. So they have got the necessary leisure and dignity which every such officer should have. The result of such a registration will be the correct checking of the interest rates, prevention of the demand for compound interest and the illegal activities of the money lender. Moreover it will be possible for us to ascertain still more definitely the magnitude of indebtedness year after year.

In this connection the possibility of licensing money lenders can be studied. First of all, it is very difficult to define who a professional money lender is. It is not uncommon that an influential and rich land lord is at the same time a big money lender. So the best method, if we want to license money lenders, will be the fixing of a maximum number of transactions during the year say fifty or twenty five. The idea of fixing the maximum amount limit, though sound, will lead to some difficulties.

After the question of interest comes the problem of the provision of easy credit. The Land Mortgage Banks are supposed to provide the necessary long term credit. The work of these banks, so far, shows no cause for satisfaction. The Government must enable these banks to lend to a larger number of clients. The percentage of indebtedness taken over by these banks comes to only 0.175%. So they must be made to follow a liberal policy. The loans must be disbursed within a short time after the application is made. The time taken at present, about six months, is too long. A wider publicity to the existence of the Takkavi Loans Act and Land Improvement Loan Act is essential. Throughout the area in which an extensive survey was made, there were only one or two aware of the existence of such Acts. In addition to publicity being given, the Government must disburse large sums of money through this channel on easy conditions.

The Co-operative Societies complain of large overdues. This can be solved to a large extent if they advance further in their operations on

sound lines. Loans on the pledge of crops must be allowed. This, combined with the marketing facilities to be supplied by the same movement in conjunction with the Government would make it possible for the easier recovery of the loans. What is wanted is the pursuit of a progressive and liberal policy on the part of the Co-operative Societies.¹

Next comes the problem of increased income. The Indian Cultivators are not getting even the fair prices for their produce. Leaving apart the questions of increased yield and diminished cost, if the ryots are enabled to get their due share of the prices their conditions will improve much. The observations made by the writers of the "Agriculture situation in 1932-'33" regarding the important aspect of the difficulties of the Indian Agriculturist has been already referred to when we discussed the causes of rural indebtedness. As Mr. Audinarayana Chettiar says "It would be nothing short of mockery to ask the farmer to cultivate his land scientifically, to use chemical manure and to grow economic crops on a large scale when we do not provide him with timely or adequate finance and do not enable him to receive even the ruling market rate for the produce of the sweat of his brow. That the average farmer is unfitted by education, upbringing and by his isolation—not to speak of his want of belief in his own destiny to fight against the organised, clever, and resourceful buyer—is only a truism." The importance of marketing facilities needs no further elucidation.²

Foremost among the measures for the improvement of marketing is the construction of a better system of roads ; the condition of road communication in the rural parts is abominable. The conditions are still worse during the rainy season. So Government must direct the local boards to attend to this question first with the promise of their help and backing whenever necessary. Direct action by the Government must also be taken. The establishment of a warehouse or godown for a group of at least five or six villages is essential. Cheap credit must be given at 6% on the security of the produce stored in the godowns either by the Co-operative Societies or by the Banks. The warehouse receipt must be classed among Negotiable Instruments. An Agricultural Information Bureau and Central Marketing Board for the Presidency as a whole are needed to disseminate information regarding markets and trade conditions.

Coming to the question of curative measures, it is beyond doubt that the present burden must be first of all lightened so that the farmer may

1. See The Co-operative Movement in the Madras Presidency. By Dr. B. V. Narayanaswamy.

2. See. Agricultural Marketing in India. By Dr. B. V. Narayanaswamy.

improve his condition. In conjunction with the measures suggested before the following measures will go a long way in achieving our object. The establishment of Conciliation or Arbitration Boards as in Bhavnagar State or in the Punjab must be aimed at. Though Conciliation Boards may not succeed so well in our Province as in that State where the Land Revenue system and Land Tenure are different and population smaller than our own, yet the Boards, if worked on those lines would at least relieve the burden in many cases. The Board must be authorised to reduce the rate of interest charge, to disallow compound interest and heavy interest demands. Above all it must spread the period of repayment over a period of about twenty years or less as the case may be. In deserving cases these private loans settled by the Board may be paid, in about ten years, to private creditors in equal parts out of a certain fund allocated by the Government for that purpose. The farmers on their part, have to repay their loans to the Government or its authorised institution in the course of fifteen years.

The property of a person to whom agriculture is the sole means of livelihood should not be placed in a state of bankruptcy on the application of the creditor except in certain special cases. The property sold by judicial process can be taken by the Government and given on hire-purchase agreement to the honest debtors to enable them to recover by their labour the ownership of their holdings. In the case of sale of lands for Revenue arrears the property must not be disposed of below 50% of its market value.

At the root of all solutions lies the question of educating the masses. Without a proper background of education, whatever legislative measures are attempted would prove futile. Compulsory free elementary education up to the sixth standard must be introduced. The lessons taught must introduce the pupils to various topics pertaining to rural development.

The activities of the Agricultural Department must be increased. A larger number of demonstrators should tour the village areas and give practical demonstrations and advice. Last but not least, the burden of Land Revenue must be lightened. Resort to coercive measures for the recovery of land arrears should be minimised. Every effort must be made to give the agriculturist all the fiscal aid he needs.

Thus the scope for State action towards ameliorating the condition of the agriculturists is wide. All the above measures, if attempted simultaneously, will go a long way to solve the problem of India's Agricultural poverty.

Periodic Simple Continued Fractions

By

S. SIVASANKARANARAYANA PILLAI

(Annamalai University)

Let $N(R)$ denote the number of elements in the smallest period of the simple continued fraction which corresponds to $\frac{P + \sqrt{R}}{Q}$, where

Q divides $P^2 - R$. Then with the help of certain theorems of I. Schur, which "are proved by making use of deep results in the theory of numbers," Vijayaraghavan* has proved that

$$N(R) = O(\sqrt{R} \log R).$$

When R contains no repeated factor, Chowla† has proved the above result, independent of Schur's theorems. In this note, I extend Chowla's method to prove Vijayaraghavan's result without any restriction. Incidentally, the following interesting result is also proved:— Let $M(x) = \sum d(n)$, where $d(n)$ is the number of divisors of n , and n runs through all the numbers less than x and prime to R . Then, when

$$\log x > \sqrt{\log R}, \text{ we have } M(x) \sim f(R)x \log x,$$

where $f(R) = \prod (1 - 1/p)^2$, p running through all the prime factors of R . (Lemma 9.)

In this paper, unless otherwise mentioned, the symbols will have only the meaning given below :—

- (1) $d(n)$ denotes the number of divisors of n ,
- (2) a/b means that a divides b .
- (3) (a, b) denotes the greatest common divisor of a and b ,
- (4) $R = p_1^{a_1} \cdot p_2^{a_2} \dots p_r^{a_r}$.
- (5) In $\sum f(d)$, d runs through the divisors of R .

* Proceedings of the London Mathematical Society, Ser. 2, Vol. 26, part 6—(403-414).

† The Journal of the Indian Mathematical Society, Vol. 18. (142-144).

- (6) In $\sum f(p)$, $\prod f(p)$, p runs through the prime factors of R .
 (7) $f(R) = \prod (1 - 1/p)^2$.
 (8) $[x]$ denotes the integral part of x .
 (9) $\mu(n)$ denotes the Mobius function.
 (10) $E(m)$ means e^m .
 (11) $N(R)$ has the same significance as explained in the beginning.
 (12) $\theta(m)$ denotes the number of incongruent solutions of $R \equiv x^2 \pmod{m}$.
 (13) p is always a prime.
 (14) In $\sum_{p \leq x} f(p)$, p runs through all primes not exceeding x .

[Compare (6)]

Lemma 1. Let

(1) p_1, p_2, \dots, p_t be the common prime factors of R and m .

(2) $m = p_1^{d_1} \dots p_t^{d_t} \cdot n$, where $d_s \geq 1$ and $(n, R) = 1$.

Then

(a) $\theta(m) \leq d(m)$, when $(m, R) = 1$

(b) $\theta(m) \leq p_1^{d_1 - [(d_1 + 1)/2]} \dots p_t^{d_t - [(d_t + 1)/2]} d(n)$

(a) follows from Mathews' *Theory of Numbers*.

Let T denote the number of incongruent solutions of

$$n \cdot p^t \equiv x^2 \pmod{p^a}, \quad (1)$$

where $(n, p) = 1$. If $a \leq t$, then $x = s \cdot p^{(a+1)/2}$.

Therefore, in this case

$$T \leq p^{a - [(a+1)/2]} \quad (2)$$

If $a > t$, and t is odd, then 1 has no solution. (3)

Let t be even and $a > t$. Then

$$x = s \cdot p^{t/2}. \text{ So } n \equiv s^2 \pmod{p^{a-t}}.$$

Hence in this case from (a), we get that

$$T \leq d(p^{a-t}) = a - t + 1 \leq p^{a - [(a+1)/2]} \quad (4)$$

When $(m, n) = 1$,

$$\theta(m) \cdot \theta(n) = \theta(mn). \quad (5)$$

From (2) (3) (4) (5), (b) follows.

Lemma 2. Let

$$(1) \quad \alpha(v) = \sum_{\delta|v} \frac{\mu(\delta)}{\delta} d(v/\delta).$$

$$(2) \quad A = \sum_d \frac{\mu(d)}{d} \alpha(d).$$

Then $A = f(R)$.

If u and v are prime to each other and contain no repeated factor, then $\alpha(u) \cdot \alpha(v) = \alpha(uv)$.

$$\text{So } A = \prod \left\{ 1 - \frac{\alpha(p)}{p} \right\} = \prod (1 - 1/p)^2 = f(R).$$

Lemma 3. If

$$B = - \sum_d \frac{\mu(d)}{d} \alpha(d) \log d,$$

$$\text{then } B = f(R) \left\{ \sum_p \frac{\log p}{p} \times \frac{2 - 1/p}{(1 - 1/p)^2} \right\}$$

Let

$$f(\theta) = \prod \left\{ 1 - \frac{\alpha(p)}{p^\theta} \right\} \quad (6)$$

Then by expanding, it can be easily seen that

$$f(\theta) = \sum_d \frac{\mu(d)}{d^\theta} \alpha(d). \quad (7)$$

Differentiating the expressions on the right hand side of (6), (7) with respect to θ , and putting $\theta = 1$, we prove the lemma.

That is, $B = f'(1)$.

Lemma 4. Let

$$\beta(v) = \sum_{\delta|v} \frac{\mu(\delta)}{\delta} \log \delta d(v/\delta)$$

$$\text{and } C = \sum_d \frac{\mu(d)}{d} \beta(d).$$

$$\text{Then } C = -A \left\{ \sum \frac{\log p}{p^2} \times \frac{1}{(1 - 1/p)^2} \right\}$$

Put

$$h(\theta, d) = \prod_{p/d} (2 - 1/p^\theta)$$

$$\text{and } g(\theta) = \prod \left\{ 1 - \frac{2 - 1/p^\theta}{p} \right\} \quad (8)$$

$$\text{Then } h(\theta, d) = \sum_{\delta/d} \frac{\mu(\delta)}{\delta^\theta} d(d/\delta)$$

$$\text{So } h'(1, d) = \beta(d) \quad (9)$$

Expanding (8), we get that

$$g(\theta) = \sum \frac{\mu(d)}{d} h(\theta, d).$$

$$\text{Hence } g'(1) = C. \quad (10)$$

Differentiating (8) logarithmically with respect to θ and then putting $\theta = 1$, we arrive at

$$\frac{g'(1)}{g(1)} = - \sum \frac{\log p}{p^2} \times \frac{1}{(1 - 1/p)^2}. \quad (11)$$

Since $g(1) = f(R)$, from (10), (11), the lemma follows.

Lemma 5. *Let*

$$M(x) = \sum d(n) \quad [n \leq x, (R, n) = 1]$$

$$\text{Then } M(x) = \sum \mu(d) D_d([x/d]),$$

where

$$D_r(n) = d(v) + d(2v) + d(3v) + \dots + d(nv)$$

This can be easily verified.

Lemma 6.

$$D_1(n) = n \log n + (2\gamma - 1)n + O(\sqrt{n}).$$

The result is well-known and elementary.

Lemma 7.

$$(a) \sum \frac{1}{\sqrt{p}} = O \left(\frac{\sqrt{(\log R)}}{\log \log R} \right)$$

$$(b) \sum \frac{\log p}{p} = O(\log \log R).$$

Now it is well-known that, if $\pi(x)$ is the number of primes not exceeding x , then

$$\pi(x) = O \left(\frac{x}{\log x} \right)$$

From, this by partial summation, it can be easily verified that

$$\sum_{p \leq x} \frac{1}{\sqrt{p}} = O \left(\frac{\sqrt{x}}{\log x} \right) \quad (12)$$

$$\text{and } \sum_{p \leq x} \frac{\log p}{p} = O(\log x). \quad (13)$$

p is a maximum as a function of R , when $R = 2 \cdot 3 \dots p$.

$$\text{Then } p = O(\log R). \quad (14)$$

From (12) – (14), the lemma follows.

Lemma 8. Let

$$(1) \gamma(v) = \sum_{\delta|v} \frac{d(v/\delta)}{\sqrt{\delta}}$$

$$(2) T = \sum \frac{\gamma(d)}{\sqrt{d}}.$$

$$\text{Then } \log T = O \left\{ \frac{\sqrt{(\log R)}}{\log \log R} \right\}$$

$$\text{Now } \gamma(d) = \prod_{p|d} (2 + 1/\sqrt{p}).$$

$$\begin{aligned}\text{So } T &= \sum_{p/d} \Pi(2 + 1/\sqrt{p}) \\ &= \Pi\{1 + (1 + 1/\sqrt{p})/\sqrt{p}\} \leq \Pi(1 + 3/\sqrt{p}).\end{aligned}$$

$$\text{Hence } \log T \leq 3 \sum 1/\sqrt{p} = O \left\{ \frac{\sqrt{(\log R)}}{\log \log R} \right\} \text{ From lemma 7.}$$

Lemma 9.

$$\begin{aligned}M(x) &= f(R)x \left\{ \log x + 2\gamma - 1 + \sum \frac{\log p}{p} \times \frac{2 - 1/p}{(1 - 1/p)^2} \right. \\ &\quad \left. - \sum \frac{\log p}{p^2} \times \frac{1}{(1 - 1/p)^2} \right\} + O \left\{ \sqrt{x} \cdot E \left(\frac{\sqrt{(\log R)}}{\log \log R} \right) \right\}\end{aligned}$$

and in particular, when $\log x > \frac{3\sqrt{(\log R)}}{\log \log R}$

$$M(x) = f(R) \cdot x \{ \log x + O(\log \log x) \}.$$

From lemma 5,

$$M(x) = \sum \mu(d) D_d([x/d]).$$

$$= \sum \mu(d) \left\{ \sum_{\delta/d} \mu(\delta) d (d/\delta) D_1(x/d\delta) \right\} *$$

$$\sum \mu(d) = \sum_{\delta/d} \mu(\delta) d (d/\delta) \{ (x/d\delta + (2\gamma - 1)(x/d\delta + O(x/d\delta)) \}$$

(from lemma 6).

$$= Ax \log x + Bx + cx + (2\gamma - 1)Ax + O(\sqrt{x} \cdot T).$$

(see lemmas 2, 3, 4, 8).

From this and lemmas 2, 3, 4, 8, the first part of our present lemma follows.

$$\text{When } \log x > \frac{3\sqrt{\log R}}{\log \log r'} \quad \text{it can be easily verified that}$$

$$\sqrt{x} \cdot E \left(\frac{\sqrt{\log R}}{\log \log R} \right) = O(f(R) \cdot x \log \log x).$$

From this, lemma 7 (b) and the first part of our present lemma, the second part follows.

Lemma 10. If

$$Q(x) = \sum \theta(n) \quad \{n \leq x, (n, R) = 1\},$$

then, when $x \geq R^{1/4}$,

$$Q(x) \leq \{1 + o(1)\} f(R) x \log x.$$

From lemmas 1, and 9, the result follows.

Lemma 11.

$$Q(x) = O(x \log x).$$

From lemma 1,

$$\begin{aligned} Q(x) &\leq \sum_{n \leq x} d(n) \\ &= O(x \log x). \end{aligned}$$

Lemma 12. If $N_{p_1, p_2, \dots, p_r}(x)$ denotes the number of numbers of the form $p_1^{\alpha_1} \dots p_r^{\alpha_r}$, not exceeding x , then, when $r = o(\log x)$,

$$N_{p_1, \dots, p_r}(x) \leq \frac{2(\log x)^r}{r!}.$$

$$N_{p_1}(x) \leq 2 \log x.$$

Assume that the result is true when the number of primes does not exceed r .

$$\begin{aligned} N_{p_1, \dots, p_r, p_{r+1}}(x) &= N_{p_1, \dots, p_r}(x) + N_{p_1, \dots, p_r}(x/p_{r+1}) \\ &\quad + N_{p_1, \dots, p_r}(x/p_{r+1}^2) + \dots + N_{p_1, \dots, p_r}(x/p_{r+1}^t) + N_{p_{r+1}}(x) - 1. \end{aligned}$$

where $t = [(\log x) / \log p_{r+1}]$.

Hence

$$\begin{aligned}
 N_{p_1 \dots p_r p_{r+1}}(x) &\leq \frac{2}{r!} \left\{ (\log x)^r + (\log x - \log p_{r+1})^r + \dots \right. \\
 &\quad \left. + (\log x - t \log p_{r+1})^r \right\} + \frac{\log x}{\log p_{r+1}} \\
 &\leq \frac{2}{r!} \left\{ (\log x)^r + \int_0^t (\log x - u \log p_{r+1})^r du \right\} + \frac{\log x}{\log p_{r+1}} \\
 &\leq \frac{2(\log x)^{r+1}}{(r+1)!} \left\{ \frac{r+1}{\log x} + \frac{1}{\log p_{r+1}} + o(1) + \frac{(r+1)!}{(\log x)^r} \right\} \\
 &\leq \frac{2(\log x)^{r+1}}{(r+1)!}, \text{ since } p_{r+1} \geq 3 \text{ and } x \text{ is large.}
 \end{aligned}$$

Thus the result follows by induction.

Lemma 13.

$N_{p_1 \dots p_r}(R) = O(R^\epsilon)$, for every positive ϵ .

Since $R = p_1^{a_1} \dots p_r^{a_r}$, maximum value of r is when $R = 2 \dots p$.

$$\text{Hence } r < 2 \frac{\log R}{\log \log R}.$$

Since $\frac{\log^r x}{r!}$ increases when r increases from 1 to $\log x$,

$$N_{p_1 \dots p_r}(R) \leq \frac{2 \log^r x}{r!} \text{ when } r = \frac{2 \log R}{\log \log R}$$

Hence the result follows by Sterling's theorem.

Lemma 14. Let

$$S_I = \sum \theta(p_1^{\alpha_1} \dots p_r^{\alpha_r}) Q(\sqrt{R/p_1^{\alpha_1} \dots p_r^{\alpha_r}}),$$

where the summation is for all numbers of the form $p_1^{\alpha_1} \dots p_r^{\alpha_r}$, which lie between 1 and \sqrt{R} . Then

$$S_1 \leq \frac{1}{2} \{1 + o(1)\} \sqrt{R} \log R.$$

From lemma 10.

$$S_1 \leq \sum \theta(p_1^{\alpha_1} \dots p_r^{\alpha_r}) \{1 + o(1)\} f(R) \frac{\sqrt{R}}{p_1^{\alpha_1} \dots p_r^{\alpha_r}} \log \frac{\sqrt{R}}{p_1^{\alpha_1} \dots p_r^{\alpha_r}} \\ \leq \frac{1}{2} \{1 + o(1)\} f(R) \cdot \sqrt{R} \cdot \log R \cdot K,$$

$$\text{where } K = \sum \frac{\theta(p_1^{\alpha_1} \dots p_r^{\alpha_r})}{p_1^{\alpha_1} \dots p_r^{\alpha_r}}, \text{ the summation being as above.}$$

From lemma 1,

$$\frac{\theta(p^\alpha)}{p^\alpha} \leq 1/p^{[(\alpha+1)/2]}$$

But $[(\alpha+1)/2] = t$, if and only if $\alpha = 2t - 1$ or $2t$.

So we can get p^{-t} only from two values of α .

Hence

$$K \leq \sum \frac{2}{p_1^{t_1}} \cdot \frac{2}{p_2^{t_2}} \dots \frac{2}{p_r^{t_r}} \quad (\text{summation as above}) \\ \leq \sum \frac{d(p_1^{t_1} \dots p_r^{t_r})}{p_1^{t_1} \dots p_r^{t_r}} \\ \leq \Pi (1 - 1/p)^{-2} = \frac{1}{f(R)}.$$

Therefore, the lemma follows.

Lemma 15. *Let*

$$S_s = \sum \theta(p_1^{\alpha_1} \dots p_r^{\alpha_r}) Q(\sqrt{R}/p_1^{\alpha_1} \dots p_r^{\alpha_r}),$$

where the summation is for all numbers of the form $p_1^{\alpha_1} \dots p_r^{\alpha_r}$, which lie between $\sqrt[4]{R}$ and \sqrt{R} . Then

$$S_2 = o(\sqrt{R} \cdot \log R).$$

From lemma 1,

$$\begin{aligned} \theta(p_1^{\alpha_1} \dots p_r^{\alpha_r}) &\leq p_1^{\alpha_1 - [(\alpha_1 + 1)/2]} \dots p_r^{\alpha_r - [(\alpha_r + 1)/2]} \\ &\leq \sqrt{(p_1^{\alpha_1} \dots p_r^{\alpha_r})} \end{aligned}$$

Therefore, from lemma 11,

$$\begin{aligned} S_2 &\leq \sum \sqrt{(p_1^{\alpha_1} \dots p_r^{\alpha_r})} \frac{\sqrt{R}}{p_1^{\alpha_1} \dots p_r^{\alpha_r}} \log \frac{\sqrt{R}}{p_1^{\alpha_1} \dots p_r^{\alpha_r}} \\ &\leq \sum \{\sqrt{R} \cdot \log R\} / \sqrt{(p_1^{\alpha_1} \dots p_r^{\alpha_r})} \\ &\leq \sum R^{1/2 - 1/k} \log R \\ &= O(R^\epsilon \cdot R^{3/4} \log R), \text{ (from lemma 13).} \\ &= o(\sqrt{R} \log R). \end{aligned}$$

Now we are in a position to prove our main result. In the paper mentioned above, Chowla has proved that

$$N(R) \leq 2 \sum_{m \leq \sqrt{R}} \theta(m).$$

Hence

$$N(R) \leq 2 \sum \theta(p_1^{\alpha_1} \dots p_r^{\alpha_r}) \cdot Q(\sqrt{R}/p_1^{\alpha_1} \dots p_r^{\alpha_r}),$$

where the summation is for all numbers of the form $p_1^{\alpha_1} \dots p_r^{\alpha_r}$ not exceeding \sqrt{R} .

Therefore, from lemmas 14, 15, it follows that

$$\begin{aligned} N(R) &\leq 2(S_1 + S_2) \\ &\leq \{1 + o(1)\} \sqrt{R} \cdot \log R. \end{aligned}$$

Thus we have proved Vijayaraghavan's result.

The Prices of Foodgrains in the Madras Presidency During the Period 1930-34

By

S. SUBRAMANIAN,
(*Annamalai University*)

1. Mr. Adyanthaya has compiled a series of index-numbers of the prices of four important foodgrains in our Presidency and discussed their variations between the years 1874 and 1930.¹ In the present note the corresponding figures for the years 1930-31, 31-32, 32-33, and 33-34 are given so as to make Mr. Adyanthaya's series complete upto 1934. The base, the method of computation, etc., are all the same as in Mr. Adyanthaya's work. A revision of the whole series has been taken on hand and it is hoped that it will be possible to publish the results before long.

2. Index Numbers : Average of 1874-75 to 1883-84 = 100.

Division	Year.	Rice 2nd Sort.	Cholam.	Cumbu.	Ragi.
West Coast	1930-31	146.6	..	..	134.3
	1931-32	117.5	..	..	117.3
	1932-33	109.2	..	..	158.2
	1933-34	94.4	..	..	108.6
East Coast Central	1930-31	153.1	144.3	159.1	144.7
	1931-32	124.8	115.5	118.5	123.8
	1932-33	113.7	110.9	128.3	124.9
	1933-34	104.5	109.5	121.4	90.1
Deccan	1930-31	155.8	111.8	118.8	114.6
	1931-32	141.0	109.1	102.2	107.4
	1932-33	132.3	105.3	117.0	109.0
	1933-34	110.4	101.5	106.2	88.0

1. "A Statistical Study of the Prices etc.," *Journal of the Madras University*, July 1933 and January 1934.

East Coast North	1930-31	156·7	143·5	149·4	140·7
	1931-32	141·7	148·6	137·8	130·7
	1932-33	127·8	136·8	134·5	121·4
	1933-34	98·2	94·8	119·0	95·2
East Coast South	1930-31	156·5	168·8	185·3	157·2
	1931-32	127·7	148·6	153·6	133·6
	1932-33	107·5	131·3	146·8	125·7
	1933-34	95·7	108·6	133·3	101·1
Madras Presidency	1930-31	153·7	142·1	153·2	138·3
	1931-32	130·5	130·5	128·0	122·6
	1932-33	118·1	121·1	131·7	127·8
	1933-34	100·6	103·6	120·0	96·6

3. The most prominent feature that may be noticed in the table is the steady and rapid fall in the price of rice in the East Coast North and East Coast South—the two main rice-producing divisions of the Presidency. It may be pointed out in this connection that the prices ruling in 1933-34 were the lowest touched since 1903.

Further a close scrutiny of the figures in the table will be found to strengthen the main conclusions reached by Mr. Adyanthaya in his paper.

4. My thanks are due to the Statistical Officer and his assistants at the Office of the Madras Board of Revenue for giving me all possible help in the collection of the relevant statistics.

Thiruvalluva Malai

By

S. S. BHARATI,

(*Annamalai University*)

There are two views about the age and authorship of the fifty-three verses now generally known as Thiruvalluva Malai. They form on the whole a fairly fine collection of well-turned verses in eulogy of the immortal Kural. They are commonly attributed by many to the members of the third Madura Sangam or the last Tamil Academy. The sponsors of this view ask us to believe that the great savants of the last Sangam in the Pandian metropolis composed and presented at a time these complimentary verses to Valluvar in token of their approval and appreciation of his Kural. These are said to be very flattering tributes, which the contemporary Sangam poets paid to Valluvar after he humbled their arrogance and broke the literary supremacy claimed by their supercilious academic clique. On the contrary some critics hold this version to be an unwarranted cock and bull story of later invention; and they maintain that these stanzas could not possibly be earlier than the period of collection and excerption of the classic anthologies of songs of the Sangam age, which cannot be before the 5th or the 6th century A.D. and must be the composition of some collaborator in the work of such excerption. In disputes of this kind, it is not easy to decide offhand; and it is not desirable to dogmatise either. It is possible only to sift the available evidence, weigh the respective arguments on both sides, and tentatively accept the view which on investigation, appears to be more probable and less unreasonable. And let us now just make an attempt to investigate this moot-controversy among scholars for the benefit of the history of Tamil Literature.

The orthodox Pandits will not be orthodox unless they are thorough-going traditionalists. In this, as in everything else, they simply offer us the common fairy tale and demand our fealty thereto. They pompously relate the vulgar legend, and retail all its elaborate details with pious unction.

(i) They repeat with all zeal, as with them repetition tantamounts to confirming corroboration, the tale as to how Valluvar miraculously triumphed over the arrogant Sangam savants, and made them eat their humble pie and officiously sing hallelujahs to him and his Kural in flat-

tering metre. And then they naively ask how we could ignore such a well-known story. "To hear is to believe" is their creed; and they would religiously consign the unbelievers to contempt and obloquy. Scepticism and any questioning spirit are the sins inexpressible in their eyes. Tradition, they hold, should simply suffice. The legendary tale is thus their sheet anchor. (ii) Some of their polemical experts sometimes also add with a gusto as a point here and a point there some names of literary fame, as conundrums, as if mere puzzling were enough proving. The most astoundingly convincing corroboration in their eyes, if any corroboration were at all wanted for this tradition about Valluvamalai, is in the language of verse No. 50 of this eulogium. It is attributed to one Kodignazhal Māni Puthanar. It simply apostrophises a Māran or unnamed Pandian; and it purports to say that its author with others learnt from the mouth of Valluvar all about the four purusharthams of life. They hang their emphatic argument on to the phrase in this verse "வள்ளுவனார் தம்வாயாற் கேளாதனவெல்லாங்கேட்டு"—"Having heard from Valluvar's mouth all that are not ordinarily heard elsewhere." How could the author of this verse use this language unless he were Valluvar's contemporary and actually listened to Valluvar's recital of his Kural distiches before the Sangam audience? With this clinching argument, they cry Q. E. D. (Quod Erat Demonstrandum), and claim they have said the last word to set this question ever at rest. And thereafter they vehemently refuse to have any more to do with those who are unfortunate enough to be yet unconvinced.

But their critics' replies to these two-fold arguments are terse and telling. The first and foremost plea of the traditionalists is summarily disposed of on the ground that the truth of the story is itself the question at issue, and therefore no argument can be hung on it. And the Sceptics can see no force in the second argument at all. They contend that its validity primarily and finally rests on the veracity of the story itself with which it is inextricably wound up. They should only stand or fall together. The language of the 50th stanza *per se* adds precious little to the solution of the problem on hand, as it leads us nowhere beyond the contested story. If the story were itself believed in, no further arguments would be wanted; if it were questioned, then this verse can give it no valid support either in itself or in its context. When the main story itself is doubted, the authenticity of this verse is also directly involved in the controversy. The moment the Valluvamalai verses are accepted as genuine, the whole discussion should cease. If the story be spurious, the verses would only be concoctions to hang this tale on.

Again, apart from the disputed authenticity there is nothing in this *venba* to postulate the veracity of the story that Valluvamalai is a per-

sonal metrical tribute to Valluvar by his contemporary rivals in the Republic of Letters. Some emphasis is sought to be laid on the words “தெளிந்தோம் வள்ளுவனார் தம்வாயாற்கேட்டு” “Learnt from the mouth of Valluvar”; and a whole theory is built on it. The words are of ordinary and common application to any admirer of Valluvar at any time, and they stand on quite a neutral ground. They need not necessarily imply any contemporaneity with Valluvar at all. Any reader of Shakespeare or Socrates to-day, who learns all the wisdom and the sweet things treasured up in their writings, may well claim to have learnt the same from their mouths as the living words of these by-gone poets. There is nothing improper or unnatural in such a statement; and their admirer need not be their contemporary at all to state in a poetic vein his indebtedness to their writings. It would be the height of fastidious and prudish puritanism to insist that a mere use of this phrase should inevitably and inexorably, in all cases, imply contemporaneity to everyone who expresses his admiration to the poets in such warm language. Moreover, this argument based on these words will be quite neutralised by the equally plausible answer that any later myth-monger could easily use such words, and would surely do so, when he wanted to hoax the credulous folks. No valid theory can therefore be built or even suggested merely from such phrases in metrical compositions.

All this knocks out the bottom of the traditionalists' story, and is fatal to their contentions. They must therefore be either content with the allegiance of the faithful votaries of mere legends as such, and should not seek the votes of inquiring critics to their superstitious shibboleths; or if they would at all enter the lists of combatants to contend for their story at the Bar of Reason, they should support it by offering irrefutable and incontrovertible evidence independent of their story. And as long as such convincing corroboration is lacking, they cannot blame the critics for withholding credence to their creed.

Ordinarily this were enough to dispose of this debate with the declaration that the proposition of the traditionalists fails for the present as it is not proved. No onus rests on their opponents, as no one can be called on to prove a negative; and they may well claim the honours of the contest with merely showing that the proposers have failed to establish the case they contended for. But in the present case, the critics carry their campaign a little further. They offer to show unmistakable and positive indications to establish intrinsic and implied proofs of the hollowness of this unhallowed story about Valluvar and his unseemly strife with the last Sangam poets. They suggest that these venba verses must be the work of some later collaborator who partook in the collection and excerpting of the anthologies of the earlier Sangam periods;

and the author of Valluvamalai, whoever he were, chose not only to be incognito, but also to father his poems on to some imaginary Sangam bards with a view to enhance the value of his eulogium to Valluvar's deathless didactic distiches, and to earn a sure recognition and certain welcome to his own eulogistic verses which the name and fame of the bards of the long past but illustrious Madura Tamil Sangam would insure. These critics are of opinion that in any event the venba verses of the Valluvamalai bear on their very face the falsity of their alleged diverse but synchronous authorship fathered on to the bards of the Sangam age. And they urge the following data for their view:—

(i) In the first place, a score of names mentioned in the Valluvamalai are not identifiable with any of the numerous stars in the great galaxy of the Sangam poets, and are nowhere to be spotted out in the wide firmament of the Sangam literature. Names like Kulapathy Nāyanar, Kodi gnazhal Māni Puthanar, Mathurai Pālasiriyānar, Kavisahara Perunthevanar, Nahanthēvanar appear to be quite chimerical, and owe their existence only to the fertile fancy of the inventor of this spurious story.

(ii) Even more damning and inexorably self-revealing stultification is offered by the fact that all the alleged authors could not have been contemporaries even if they were poets of the Sangam age. Some of these poets at least are now known to have lived in different times with intervals so long between that to bring them together is not humanly possible. Kapilar, Nakkirar, Avvai, Kulavanikan Sathanar, Parānar and Perundēvanar lived ages apart. They were not all contemporary members of the third Sangam in its last days. They therefore could not have all met Valluvar together, if he ever took his famous Kural for the imprimatur of a dying Sangam in its days of decadence only to give it an inglorious burial. For, the story of the traditionalists says that Valluvar was received by the proud forty-nine members of the last Sangam with hauteur, and then they lavished their fulsome flattery on him by these verses when he humbled their pride with miracles and divine intervention. Recent researches have now indisputably established that these and some other bards found in the Valluvamalai lived in different periods, and could not all be contemporary members of any Sangam sessions.

(iii) Ugraperuvaluthy, the Pandian poet-king to whom Valluvamalai attributes a venba, was not on the Pandian throne when Koolavaniyan Sathanar lived and composed his famous epic of Manimekhalai; and the latter's contemporary Pandian, Āryappadai Kadantha Nedunchelian, is not said to have given his recognition to the merits of Vallu-

var's Kural, which must in itself be deemed fatal to any literary work brought to the Madura Sangam of his days for its imprimatur.

(iv) According to the traditionalists, Valluvar rightly humiliated the forty-nine recalcitrant Sangam members, and in the sequel they all wriggled out of their discomfiture by offering homage to their victor by simultaneously bursting out into songs of eulogy. Their verses since then went with Kural as its especial epilogue. Why does Valluvamalai contain fifty-three instead of only forty-nine verses, which should be if the story were true? The alleged authors of the other four Venbas were never members of the Sangam; and their verses have no place whatever in this phase and version at all of the story.

(v) The opening verse is illuminating, and exposes the fallacy involved in this spurious story. It is attributed to "Asareeri" or the anonymous incorporeal sky-flier; whoever this be, it were nothing short of lunacy to believe that this anonymous author when directly and personally addressing Valluvar could end his verse by attributing it to some other anonymous author. The last passage of this first verse runs thus :—"எனவுரைத்து, வானில் ஒருக்கனோ என்றதோர் சொல்" In equivalent English it must read as follows :—"So saying, there was a word in the sky sounding once 'oh.'" This gives the whole case of the traditionalists away. For, this passage unequivocally makes it crystal clear that the author of the indirect concluding passage of this verse is not and cannot be the same person to whom the direct address in the preceding lines is attributed in this Venba. This Venba expressly purports merely to report someone else's statement. Its real author simply attributes here in so many words some fancied or fanciful address to an anonymous and invisible aeronaut. This verse really pricks the bubble and significantly suffices to destroy for ever the illusion and the spell of the legend about the authorship of the Valluvamalai.

(vi) There is just one other fact about Valluvamalai verses which adds its own condemnation of their alleged multitudinous authorship attributed to the Sangam poets. The traditionalists allege that in answer to the challenge of the proud poets of the third Sangam, Valluvar placed his Kural on the magic plank which served to measure the merits of all who claimed equal honours with, or literary laurels, from the Sangam savants. The plank forthwith shrank up to hold only the holy Kural, throwing overboard all the forty-nine fellows of the Academy usually seated on it. Thereupon the crest-fallen Sangam poets struggling in the tank-water simultaneously sang out each a venba *ex tempore* eulogising Kural and its divine author and expiating their erstwhile sin of treating both with callous contumely. This, if true, would postulate that the Valluvamalai venbas

were all unpremeditated and composed offhand on the spur of the moment and independently of each other. They can have little or no relation with each other in matter or manner, no connection or co-ordination of any kind in thought, diction or design between them. But as a matter of fact, Valluvamalai reveals a well-thought-out, well-planned and well-ordered scheme running throughout all its verses, continuously and in perfect concord. In the circumstances alleged by the traditionalists, each of the forty-nine poets, sang out his own verse independently and *ex tempore*. They had no occasion to consult each other before-hand or to concert, plan out and allot definite shares to each of them on a common partnership in praise of Kural. Each poet could thus have spoken out only his own mind and feeling in measuring the value of Kural in its entirety. No one could contentedly confine himself in the circumstances merely to sections of the Kural in expectation that any other of his fellow poets would just take up where he left and complete the scheme of eulogy as he planned and on his own lines. And yet this is exactly what we now find in the Valluvamalai. It refreshingly reveals a studiously harmonised, artificially well-arranged, and logically co-ordinated scheme. It is not mere words of meaningless flattery from diverse men offered piece-meal and strung into a haphazard cordon of discordant beads. This garland of well-turned venbas with a fine finish and select settings, shows the consummate skill of a master artist. There are verses particularly venbas Nos. 25 to 28, 33, 37 and 44 which emphatically suggest that the whole garland of Valluvamalai venbas, must be the product of one mind and manufactured in one workshop. This fact in itself refutes and rules out the tale of the traditionalists attributing the 53 venbas to a multitude of authors in the third Tamil Academy of Madura.

(vii) Again, if these fifty-three venbas formed the especial prologue known as Chirappu-payiram (சிறப்புப்பாடம்) to Kural, then it is inconceivable why the great classic commentators like Parimelazhakar and Manakkudavar ignored them altogether. The Chirappu-payiram to any book is designed and deemed in all Tamil Literature as a very definite and organic part of the book to which it is attached. In theory and practice alike, Chirappu-payirams should form part and parcel of the treatises themselves. They are always prescribed and treated as indispensable adjuncts to books of all sorts, holding the key to open the author's real heart and soul and to explain the inner currents of thought in the book to the readers. They serve as essential introductions in vital and organic relation with the theses in the main books, so much so that only a select few who alone can claim intimate knowledge of and living contact with the authors in the first degree are ordained and permitted to write such Chirappupayirams to such authors' books. It

is not open to all and sundry readers or admirers of any book to write and append these introductions thereto ; but it is the privilege only of a select few within strictly delimited area to offer these especial introductions to the literary works of any author.

Any Chirappu-payiram writer must come under one or the other of the four categories laid down in the Tamil grammars. The authors of such introductions should hold relation to the author of the book either as his own teacher, his student or his fellow-pupil, who alone may have studied him at close quarters and so may know all about him thoroughly. This is the general rule regarding the rights to write introductions to any author's book. The policy and principle for this prescription are only too obvious. It is only close acquaintance with the thoughts and feelings of any author that will enable, and so should entitle, others to offer appropriate and adequate introductions to such author's works. The only rare exception, recognised outside this collegiate circle with sacred and secret bonds of soulful sympathy, is in the case of talented commentators whose thorough acquaintance with and love for a literary work as much as their great erudition and skill may afford a special guarantee that they understand and can expound the author's real mind as revealed in the author's book.

“ தன்னு சிரியன் தன்மா னுக்கன்
தன்னுடு கற்றேன் றகுமுரை காரனென்று
இன்னோர் பாயிர மியம்புதல் கடனே ”

In the face of this rigorous rule of grammar relating to these special Payirams, it is no wonder that very great importance is attached to them in the Tamil literary circles. The Payiram to Tholcappiam is not only annotated by all the classic commentators to Tholcappiam ; but it has also been the theme and thesis for many a monograph at the hands of very learned and talented scholars since. In fact it would be a wonder if a commentator to any book fails to take note of the introduction to that book. Valluvar's Kural has the rare privilege of reckoning ten master commentators to vie with one another to annotate and expound it. And yet not one of these ten eminent commentators is known so much as even to refer to any one of these fifty-three verses of Valluvamalai, or to leave a trace or hint about their existence. They had no commentary nor annotation from any scholar of repute till Saravana Perumal Aiyar recently published glossarial paraphrase for them. Kural is one of the most widely read books in the world's literatures. Nevertheless nowhere in the entire range of Tamil Literature except Kalladam, do we meet with any credentials for the Valluvamalai Venbas. No writer of any note till recent times except the author of Kalladam took any notice of this so-called Chirappu Payiram to Kural. And we shall deal with the reference in Kalladam presently.

Thus not only all the ten Kural commentators appear to have ignored them entirely: but all the other Tamil writers of repute as well, since Valluvar's time, paid no heed whatever to these fifty-three venbas. Virtually they were taboo to the real republic of Tamil letters. There must be very cogent and strong reasons for this unnatural and unholy conspiracy among all writers of all times for nearly two millenniums to consign the fifty-three fine venbas of Valluvamalai, if they really formed the Chirappu Payiram to Kural from its very inception and composed by the Sangam poets—as the story tellers try to make out. So far as we see, no such valid reasons are forthcoming to explain this strange phenomenon. The only irresistible inference it leads us to is that this Tiruvalluvamalai did not exist anywhere in early times, and our ancients were not even aware of any such Chirappu-payiram, and when some later literary forger concocted them, standard writers consistently refused and were reluctant to give them recognition of any sort on their part.

(viii) There is also this further fact in this connection which militates against the traditionalist-version. Their thesis is that these fifty-three venbas contemporaneously composed by the forty-nine Sangam poets and four others to whom Valluvar read his Kural, formed from the very start its Chirappu-payiram or special prologue under the name and style of Valluvamalai. None of their alleged authors answers to the characters or complies with the conditions laid down in Tamil Grammars for eligibility to be Payiram-writers to Kural as we saw just now. None of the fifty-three eulogists named in this Valluvamalai stood to Valluvar in any relation required by the rule of grammar as a qualification to write a Payiram to Kural. Whatever value their compositions may otherwise command, however superlative the merits of these verses may be, they simply cannot and shall not become Payirams as the accepted canons and conventions of the Tamil Men of letters bar them out of such a category. This cuts the very ground from under the feet of the thesis of the traditionalists. Their whole story would be watered down and lose all its value, if not totally negated, when Valluvamalai verses are thus bared and stripped of their special claim and characteristics as Chirappu-Payiram to Kural.

(ix) The critics of this tradition also point to another feature of the Valluvamalai verses, which helps us to unmask and destroy their pretentious claim to antiquity. In the venbas of Valluvamalai what is now known as Vahaiyuli (வகையுளி) is very much in evidence. Vahaiyuli is a fault in metrical composition which consists in splitting and distributing the syllables (அசைகள்) of one word into different feet (சீர்கள்). This was uncommon if not quite unknown in Sangam poetry ;

but it gradually crept up on the sly in the medieval times, at first rarely and under sufferance when natural poetry was replaced by artificial versification ; and it was finally condoned and regularised only by the latest treatises on Tamil Prosody.

The entire Sangam literature is conspicuous by the absence of Vahaiyuli except rarely in the final or concluding mono-syllabled foot of a venba : and even such rare exceptions would only be the super-added suffixes of verbs which normally end both the logical and the grammatical sentences, and where therefore no violent break in the cadence or concept is noticeable.

In Valluvamalai Venbas on the other hand, not rarely but copiously, not only for the one-syllabled final foot at the end of a venba, but for all feet and at all places in verses, not merely suffixes of verbs but all co-equal component parts of all parts of speech are ruthlessly split up to form different feet, in any and every verse. Even personal and proper names are outrageously subjected to this barbarous ordeal of verbal and syllabic anatomizing and crude scanning in the Valluvamalai. A few glaring and arresting instances culled offhand from the venbas of Valluvamalai would amply illustrate this vitiated degenerate taste and the excessive fondness of its author for this licensed libertinism land-marking later-day versifying :

- “ திருவள்—ஞவருலகம் ”
 “ தங்குறள் வெண்—பாவடியால் ”
 “ தமிழ்ப்புலவ—ராய்க்கேட்க ”
 “ வளஞவர்முப்—பாணூல் ”
 “ எப்பா—வலரினும் ”
 “ முதற்பா—வலரொப்பார் ”
 “ தான் வள்—ஞவனாகி ”
 “ அந்தா—மரைமேல் ”
 “ பயன் வள்—ஞவனார் ”
 “ மீதத்—கன ”
 “ டிறங்கொளிமா—லைக்கும் ”
 “ கறங்கிருண்மா—லைக்கும் ”
 “ திருவள்—ஞவந்தாமும் ”
 “ திருவள்—ஞவரன்றி ”
 “ திருவள்—ஞவர்செப் டியகுறளால் ”

This sin of strangling, maiming and mutilating words to facilitate scanning in metres is so rife, as you find a score of them within the 49 venbas attributed to the Sangam poets in Valluvamalai ; whereas we hardly meet with one of its ilk in the 1,330 verses of Kural or in the

whole wide world of Sangam poetry. This in itself suffices to show that Valluvamalai must belong to the limping later-day metres of licensed libertinism and of unnatural, harrowing, artificial refinements. This would also warrant another relevant conclusion that rather than gratuitously presuming all the forty-nine bards of the last Sangam guilty of indulgence in this unhallowed 'vahaiyuli' simultaneously in their single-verse-contributions to Valluvamalai, it is more reasonable to believe these venbas to be the work of a single versifier partial to this poetic perversity.

Thus we see that the venbas of Valluvamalai with their unabashed indulgence in this unchaste, unsangam 'vahaiyuli' wear on their very face a convincing proof of their later post-Sangam origin, and of one man's authorship, both of which are fatal to the traditionalists' story.

Incidentally in this connection, another plausible argument of the traditionalists may also be disposed of. They suggest that the very mention of these venbas in many old cadjan books of Kural in the names of the diverse Sangam poets squares only with, and so should suffice to support, the common belief as to their authorship now current in the Tamil country. And in all solemnity they propose to pillory and banish scepticism by scoffing out all critics with sage-smiles for their daring suggestion of even a possibility of the posthumous forgery of Valluvamalai, which they hold is simply incredulous in this country. A craze to foist one's own compositions on some other famous authors of prior times is neither unknown nor uncommon. We meet with instances of this craze in all countries and at all times. Even in the vigilant West which plumes itself with a claim for eradicating and extinguishing credulous superstitions of every kind, and enthroning and establishing the sway and supremacy of enlightened Reason for ever, we hear of surprising examples of this literary fraud. Not a few lines or verses alone, but a whole literature in a bulky tome was palmed off in Great Britain by Macpherson as the work of Ossian, a Scotch poet of a prior age; and this caused quite a furore in the entire English speaking world till the audacious forgery was unmasked and laid bare by relentless research! In our Tamil country, this mad craze is known to be, if anything, even more common and widespread. Kandiar (கந்தியார்) among the Jains, and Velli Ambala Thambiran (வெள்ளியம்பலத்தம்பிரான்) among the Hindus are notable names of literary cranks who riddled even the best and most sacred poetic works of all kinds with their forged verses. The classic repute, the sanctity of masterpieces only added to their zest and craze instead of cold douching or restraining their mad pranks. Even classics like Chintamani, Kamba Ramayanam and Periyapuram were not spared, but freely

defiled by these cranks. Even to this day, we know that all sorts of compositions are freely and fearlessly forged and palmed off without serious challenge as the works of Sootha Muni, Agasthiar or some other fancied favourite Siddhar of by-gone days. So there is no reason to look aghast or pretend surprise, if rational students refuse to be lulled into credulity, and venture to question the credentials for the legends about Valluvamalai and the alleged authorship of its verses.

All these cogent arguments not only annihilate the legless legend attributing Valluvamalai verses to the Sangam savants ; but they go far enough to convince impartial inquirers that they must have been composed only at a later age and by some zealous admirer of Valluvar wanting or hoping to enhance the value of his eulogy by palming it off in the name of poets of the bygone Sangam age. It now only remains for us to ascertain if possible the why and wherefore of this fable about Valluvamalai. We cannot dogmatise of course ; nor can we at this distant day expect to find positive facts to prove exactly as to when, where and by whom was started this literary canard. But we may well survey the surrounding circumstances, and safely surmise the probable truth from natural events after eliminating fallacies and with rational inferences warranted on their own merits. We now know for a fact that the Sangam poets were realists, and enjoyed and exulted in unfettered freedom in theme and thought, design and diction of their poetry. They did not scruple to revel in poetry without invoking God at the beginning of each of their poems. Only the post-Sangam Buddhist and Jaina scholars started, and the later Saivite and Vaishnavite poets canonized the convention of compulsory invocatory verses for every poem and literary work of all species. Once started it soon ceased to be optional or a mere matter of taste, and hardened into such a cardinal inviolable law of letters, that under its coercive operation for all the excerpted anthologies and collections of Sangam poems their later editors had such invocatory verses newly composed and added to them.

Again the age of religious revival since the seventh to the twelfth century A.D. reveals a jealous rivalry between votaries of the different religious groups in concocting and foisting all sorts of evidences in order to claim all the great cosmopolitan master-poems of the classic age to their respective sects. Iraiyanar Ahapporul and Valluvamalai are but two extreme instances of this zeal among the literary men of this period. The former is fathered on to God Siva and the latter is foisted on the last Sangam poets of whom all but their fame and some names was already forgotten.

The changes in the conditions and circumstances since the Sangam age were so many, and the break from it so great in Tamilaham since

the 6th century and after, that a heavy and thick fog hangs between these two periods and veils all the vistas by which any glimpse of the earlier golden epoch may scintillate. Fanaticism reigned rampant, and casuistry in the guise of piety served all the jesuitical zealots to dare anything in the name of religion. Any excesses and lapses calculated to glorify sects were not only permissible, but were often welcomed as even meritorious. It can be no wonder therefore that the uncritical and pious Saivite author of Kalladam took up the new legend about Valluvamalai with avidity, and brocaded it into his elaborately embroidered fabrics of Kalladam. We know Kalladam cannot be earlier than the 10th century A.D. ; it was probably even of a much later age. For, it has references to many events and names historically established to be of the 9th and 10th century A.D.

The passage in Ahaval No. 15 in Kalladam speaks of God Siva as the author of the very first verse in Valluvamalai ; whereas the *venba* attributed to (Iraiyanaar) Siva now stands as the third verse in the extant editions of this prologue to Kural. Whatever it be, it simply shows that the fable of Valluvamalai took shape before the author of Kalladam piously wove it into one of his Ahavals therein in praise of Siva. This is only as it should be in an age of religious fanaticism. It will be no authority to build or base any valid historical theory upon. On the materials available and as a result of an impartial investigation, we will be constrained to reject the legend as unhistorical and highly improbable, and accept at least tentatively the thesis of their critics that Valluvamalai must be the composition of some later religious zealot and foisted on to the real and imaginary names of poets of the famous bygone Sangam periods.

தொல்காப்பிய ஆராய்ச்சி

By

S. S. BHARATI,

(Annamalai University)

முன்னுரை

இவ்வாராய்ச்சி தமிழிலக்கணமாகிய தொல்காப்பியச் சூத்திரப்பொருள் பற்றி யெழுபது. இதில் நாகரிக ஒப்புயர்வுகளைப்பற்றிய கருத்து எதுவுமில்லை. சென்ற ஆயிரம் ஆண்டுகளுக்கு மேலாகத் தமிழகத்தில் ஆரியநாகரிகமும் தமிழ்நாகரிகமும் இரண்டறக்கலந்து சமைந்ததோர் புதுநாகரிகம் யாவருக்கும் பொதுவுடைமையாய் நின்று நிலவுகின்றது. இது, தற்கால வட இந்தியநாகரிகத்தை நோக்கச் சிறிது வேறுபாடுடைய தெனினும், தென்னாட்டில் சமயசாதி வேறுபாடுகளால் மாறுபடாது; ஆரியர் தமிழர் என்ற பிளவுணர்ச்சிக்கு இடந்தாராது. எல்லாருக்கும் பொதுநிதியாகப் பாராட்டப்பட்டு வருகின்றது. இப்பொதுநாகரிகமக்களுள் இது பற்றிய வாத்தத்துக்கு எதுவில்லை. இக்கட்டுரை கருதுவதெல்லாம் சில தொல்காப்பியச் சூத்திரங்களின் உண்மைப்பொருள் வரையறை செய்யும் முயற்சியின் அளவிற்பேயாகும்.

இனி, மிகப்பழைய தொல்காப்பியக்காலத் தமிழகத்தில், தமிழரின் தனிநாகரிகம் ஒன்று ஆரியநாகரிகத்தின் வேறுபட்டதாக இருந்ததென்பது, தொல்காப்பியத்தாலும். வான்மீகம் முதலிய பண்டைய வடநூல்களாலும் விளக்கமானது; சரித ஆராய்ச்சியாளர் அனைவரும் ஒப்புக்கொள்வது; பழைய பல தமிழ்நூல்களில், 'தென் தமிழ் மரபு'—'வட ஆரியர் வழக்கு' என வேறுபிரித்துத் தெளிக்கப் பெற்றுள்ளது. அவ்வறப்பழங்காலத்தும் அவ்விருநாகரிகமக்களும் ஒருவரை ஒருவர் மதித்துப் பாராட்டி வந்ததன்றி, இழித்துப் பழித்துப் பயின்றவரல்ல ரென்பதை இவ்விருபெரு மொழிகளிலும் அக்காலத்து எழுந்த தலைமைப்புலவர்களின் விழுமிய நூல்கள் விளக்குகின்றன. இது நிற்க.

தொல்காப்பியம் தனித்தமிழ்இலக்கணமாகவே, அதன் சூத்திரப்பொருளைத் தெளிந்து துணிவதற்குத் தமிழ் மரபுகளே துணையாகு மென்பதையும், விதந்து விளக்கப் பெறுதவிடங்களில், தொல்காப்பியர் தாம் கூறுவது தமிழ்மரபேயெனத் தெளிவித்திருப்பதனால், தென்தமிழிலக்கணமான இதன் எல்லாச் சூத்திரங்களுக்கும் வட ஆரியர் வழக்குக்களையும் வடநூல் முடிபுகளையும் ஆதாரமாக்கி அவற்றிற்கிணங்கப் பொருள்காண முயல்வது தொல்காப்பியர்கருத்துக்கே மாறாகும் என்பதையுமே நான் எடுத்துக்காட்ட விடையேற்கின்றேன். தமிழ் ஆரிய மரபுவேறுபாடுகள் ஒரோவிடங்களில் எடுத்தாளப் பெறுவது இக்கட்டுரைக்கு இன்றியமையாததாகும். என்னெனில், இதில் யாண்டும் இவ்விருநாகரிக உயர்வு தாழ்வுகள் தாக்கி அளக்கப்பெறு. அது என் ஆராய்ச்சிக்குச் சிறிதும் அவசியம் அன்று. ஆத

லால், இவ்வாராய்ச்சிக்கட்டுரையில் மாறுபாட்டுணர்வுடன் நாகரிகமரபுகளின் ஏற்றத்தாழ்வு வேறுபாடுகளைத் தேடுபவர் உண்மையினைத் தெளியமாட்டார். நடுநிலையில் இலக்கண அமைதிகளை நுண்ணுணர்வான் நிறுத்து அளக்க எண்ணுவோர்க்கே இவ்வாராய்ச்சி பயன்படுவதாகும்.

(A) தொல்காப்பியப் பொருள திகார ஆராய்ச்சியிற்கண்ட சில குறிப்புகள்.

ஆசிரியர் நூலியற்றியது, தமிழகத்தில் தமிழர்மரபு கூறும் பண்டைத்தமிழ் முத்நூல்களையும், தமிழ்மக்கள் கையாண்ட வழக்குக்களையும் கவனித்து அவற்றை வடித்தெடுத்து, தமிழிலக்கியங்களுக் காமாறு இலக்கணமெடுத்தோதற்கே யென்பதை, பாயிரத்தும், நூலுட் பலஇடத்தும், பணம்பாரரும், ஆசிரியருமே விளக்கிப் போந்தனர். [cf. பாயிரம்; பொருள், அகம். சூத்திரம்-53] நூல்துதல்பொருளே பாயிரம் நுவுலுமாகலின், பாயிரக்கருத்தொடு முரண நூலினுட் பொருள் கூறல் பொருந்தாது. தொல்காப்பியம் துதலிய பொருளைப் பாயிரம் விளக்குமாறு:—

“ வடவேங்கடந் தென்குமரி
யாயிடைத்தமிழ்கூறு நல்லுலகத்து
வழக்குஞ் செய்யுளு மாயிரு முதலி
னெழுத்துஞ் சொல்லும் பொருளுநாடிச்
செந்தமிழியற்கை சிவனிய நிலத்தொடு
முந்துநூல் கண்டு முறைப்பட வெண்ணிப்
புலந்தொகுத்தோன் ”

என்பதனால் நன்கு அறியப்படும். ஆதலால், தொல்காப்பியச் சூத்திரமெல்லாம் தமிழகத்திலுள்ள வழக்கங்களையும் தமிழ்நூல்களையுமே தழுவியும் ஆதரவாகக் கொண்டும் இயற்றப்பெற்றன வென்பதும், அப்பெற்றியே பொருள்படுவன வென்பதும் தொல்காப்பியத்திலேயே விதந்து விளக்கப்பட்டுள்ளன. பிறவட நூன் மரபுகள் வடவாரியர் வழக்குகளைத் தம் நூலில் ஒப்புமை முதலிய கருதிச் சுட்டுமிடங்களில் அவை பிறநாட்டு மரபு வழக்குகளென்பதை ஆசிரியர் தாமே மயக்கத்துக்கிடனின்றி விளக்குகின்றார் :—

“ இன்பமும் பொருளு மறனு மென்றும்
கன்பொடு புணர்ந்த வைந்திணை மருங்கிற்
காமக்கூட்டங் காணுங் காலை
மறையோர் தேளத்து மன்றலெட்டனுட்
டுறையமை நல்லியாழ்த் துணைமையோ ரியல்பே ”

ஆசிரியரின் இச்செவ்வியமுறை அவர் அப்படிச் சுட்டாவிடங்களில் தொல் காப்பியச் சூத்திரங்கள் தமிழர் மரபுவழக்குகளோடு பழைய தமிழ் நூல்களைத் தழுவித் தமிழிலக்கணங்காட்டுவன என்பதைத் தெளிவாக்கும். அன்றியும், தமிழ் மரபுகளை விளக்கவந்த தமிழிலக்கணச் சூத்திரமனைத்தையும் பிறமொழி நூன்மரபுகளுக்குப் பொருந்த மொழிகளைச் சிதைத்தும் வதைத்தும் வலிந்து பொருள்தேட முயல்வது இயற்கையும் அறிவும் ஆகாது. ஆகையால், ஆசிரியர் தெற்றெனக்கூறித் தெளிவியா இடங்களிலெல்லாம், தமிழ்மரபும் தமிழ்மொழி யிலக்கணங்களுமே விளக்கப்படுதல் விசதம். ஆகவே, ஆரிய நாட்டார் வழக்கங்கள் அல்லது ஆசாரங்களையும் நூல்களையுமே கொண்டு தொல்காப்பியச் சூத்திரங்களுக்குப்பொருள் கூறிப் போவது பொருந்தாது; ஆசிரியர் கருத்துக்கும் அது முரணுவதாகும்.

ஆரியரின் வேதமும், தருமசாஸ்திரங்களும், ஆரிய நாட்டாரின் ஆசாரங்களும் ஆரியரல்லாத பிற சமூகத்தாரான தமிழருக்கு விதந்து கூறாவிடத்து இயைவனவல்ல; அவற்றைச் சுட்டுவதும் தனித்தமிழிலக்கணங்கூற வெழுந்த, தொல்காப்பியர் கருத்தன்று என்பது தொல்காப்பியம் படிப்பவர் எல்லார்க்கும் மறக்கொண முத்தக்கடனாகும். இக்கடமை கடைப்பிடித்து, தொல்காப்பியப் பொருளதிகாரத்தை ஆராயப் புகுங்கால், உரையாசிரியர்கள் இதனை மறந்து முற்றிலும் தமிழ் மரபுகளுடன் முரணிப் பொருந்தாப் புதுப்பொருள் கூறப் புகுந்து சூத்திரச் சொற்போக்கும் நூலோக்கும் இகந்து பிழைபட்டுச் சூத்திரங்களுக்குச் செம்பொருள் காணக்கூடாமற் போயினுரெனத் தெரிகிறது. முக்கியமாக நச்சினார்க்கினியருரை மிகவு மிடர்ப்பட்டு, உண்மைப்பொருளைத் தெளிப்பதற்கு மாறாகப் பலவிடத்தும் ஐயந்திரிபுகளை மலிவித்து நடக்கின்றது. உதாரணமாக :—

I தொல், பொருள், புறம், சூத்திரம், 26.

“அமரர்கண்முடியும் அறுவகையானும்
புரைதீர் காமம் புல்லிய வகையினும்
ஒன்றன் பகுதி ஒன்று மென்ப”

இதற்கு இளம் பூரணர் உரையாவது :—“அமரர்கண் முடியும் கொடிநிலை கந்தழி வள்ளி புலவரற்றுப்படை புகழ்தல் பரவல் என்பனவற்றினும், குற்றந்தீர்ந்த (ஐந்திணை தழுவிய அகமான) காமத்தைப் பொருந்திய வகையினும், அவற்றின் ஒருகூற்றின் பாகுபாடு பாடாண்டிணையாதற்குப் பொருந்தும்”, என்பதே.

“கொடிநிலை முதலிய ஆறும், கடவுட்புகழ்ச்சியன்றிப் பாட்டுடைத்தலைவினைச் சார்த்தி வருதல், காமப்பகுதியிற் பாடும் பாட்டுடைத்தலைவினைச் சார்த்தி வருதல், என்ற இவ்விருவகையானும் ஒருவினைப்புகழ்தலால் பாடாண் பாட்டாயிற்று” என்பது இச்சூத்திரத்தின்கீழ் இளம்பூரணர் தரும் விசேடவுரையாகும்.

[N. B. இங்குத் தரும் சூத்திர எண்கள் நச்சினார்க்கினியர் உரையில் வரும் சூத்திர எண்களாம்.]

இனி இதற்கு உரைகாணும் நச்சினூர்க்கினியர் கூறுவது :—முதற்கண், “பாடாண்திணை தேவரும் மக்களும் என இருதிறத்தார்க்கே உரிய என்பார், இவ் விரண்டனுள் தேவர்பகுதி இவை யென்பதுணர்த்துகிறது” (இச்சூத்திரம்) என்று இச்சூத்திரக்கருத்தை வரைந்து கொள்ளுகின்றனர். பின்னர், தாம் வரைந்து கொண்ட கருத்துடன் பொருத்த,

“பிறப்புவகையானன்றிச் சிறப்புவகையால் தேவர்கண்ணே வந்து முடியும் அறுமுறை வாழ்த்தின்கண்ணும், அத்தேவரிடத்தே உயர்ச்சி நீங்கிய பொருளை வேண்டுங் குறிப்புப்பொருச்சின பகுதிக்கண்ணும், மேல் பாடாண் பகுதியெனப் பகுத்து வாங்கிக்கொண்ட ஒன்றனுள்—தேவரும் மக்களும் எனப்பகுத்த இரண்டனுள்—தேவர்க்குரித்தாம் பகுதியெல்லாங் கொக்கு ஒருங்குவரும் என்று கூறுவார் ஆசிரியர்” என்று பொருள் கூறலானார். இதன் பிறகு தாம் கூறும் புதுப்பொருளைப் பொருத்திக் காட்ட வேண்டி விசேடவுரையிற் பல வருவித்துக் கூறுவர். அவையிற்றுள் இங்குச் சில கூறுதும்.

அமரரான தேவர் பரவப்படுதலேயன்றி, “முனிவரும் பார்ப்பாரும் ஆனிரையும் மழையும் முடியுடை வேந்தரும் உலகு”மாக ஆறும் பரவப்படுங்கால் அப்பராவு தேவர்கண்ணே வந்து முடியுமென்பர். அன்றியும் பரவப்பெறுங் தேவரல்லா இவ்வாறும் “சிறப்பு வகையால் அமரர் சாதிப்பால் என்றல் வேதமுடிவு” என ஓரமைதி காட்டுவர். இனி “புரைதீர் காமம் புல்லியவகை” என்பதில் புரையைக் குற்றமெனனது அதற்கு மாறாய் உயர்ச்சியெனக் கொண்டு, உயர்ந்த மறுமையப்பறும் வீடுபெறு வேண்டாமல் இழிந்த இம்மைப்பயன்களை விரும்பிக் தேவர்ப் பராவுதலை ஆசிரியர் “புரைதீர் காமம் புல்லிய” தாகக் கூறினானெனக் கொள்ளவைக்கின்றார். “ஒன்றன் பகுதி ஒன்றும்” என்றற்கு “உரித்தாம் பகுதியெல்லாம் தொக்கு ஒருங்குவரும்” என்று கூறுவர். இச்சூத்திரத்துக்கு நச்சினூர்க்கினியர் கண்ட இப்பொருள், இளம்பூரணர் உரையோடு மாறுபடுவதுடன், ஆசிரியர் தொல்காப்பியர் கருத்தும் ஆகாமை சிறிது சிந்திக்கச் சித்திக்கும்.

1. முதலில் தாம் கருதிய “ஆறுவகை”யினை ஆசிரியர் யாண்டு எவ்வாறு சுட்டினாரென்பதை இரண்டு உரைகாரருமே விளக்கினுரில்லை. தாம் கூறக்கருதிய தொகைப்பொருள் இவையெனத் தாமே வகைசுட்டி விளக்காமல், உரைப்பார் உரைக்கும் வகையெல்லாம் சென்று அமையச் சூத்திரிப்பது இலக்கணநூல் போக்குக்கும் தொல்காப்பியர் போக்குக்கும் பொருந்துவதன்று. ஆசிரியர் தாமே வரையறை செய்திலரெனில், அஃது அவர் நூலைக்கற்பவரை மயங்கவைக்கவும் மாறு கூறவும் இடந்தரும் இழுக்காய் முடியும். ஆசிரியர் கூறும் அறுவகையினை ஆசிரியர் நூலிலிருந்தே கண்டு தெளியாமையானே உரைகாரர் பலரும் பலவாறு தத்தம் மனம்போனவாறெல்லாம் மாறிக் கூறக்கிடனாயிற்று. இதனாலன்றே நச்சினூர்க்கினியர் ஈங்கு அறுவகையினைப் பரவும் வகையாக்காமல் பரவப்படும் செயற்கைத் தெய்வப்போலிகளாம் ‘படிமையோர் - பார்ப்பார் - பசு - மழை - மன்னர் - மண்’ என்

மெண்ணிவைத்தார். இதற்கு மாறாக இளம்பூரணர் ஈண்டு இவ்வாறினையும் வணங்கப்பெறும் பொருள்களாக் காமல் வணக்க வகைகள் ஆறெனக்கொண்டு, “கொடிநிலை கந்தழி, வள்ளி, புலவராற்றுப் படை, புகழ்தல், பரவல்” என்று ஆறுக்கிக் கூறுவர். நூறுவல்ல இருபேருரைகாரர் தம்முள் இவ்வாறு வெவ்வேறு பொருள் மாறுகூறு வரேல், கற்போர் இதற்குண்மைப்பொருள் துணிவதெப்படிக்கூடும்? இவ்வாறு பலரும் பலவாறு கூற இடம்வைத்துத் தெளிவின்றி மயங்குமாறு ஆசிரியர் சூத்திரி யாரென்பது ஒருதலை. அவர் துணிந்து தெரிக்க நுகலிய பொருளை நுகலும் இச் சூத்திரத்து அறுவகைகளை ஆசிரியர் நூலிற்கண்டு தெளிவதே கற்பவர்தங் கடனாகும்.

2. இனி, ஈச்சினூர்க்கினியர் உரையில், நேரே பராவப்படும் பிறப்பு வகையால் இயற்கைத் தேவராவார் வேறு: தேவராய்ப் பிறவாவிடினும், வைதிகர்வாய்ச் சிறப்பு வகையால் நாம் பெறும் வணக்கத்தை மெய்த்தேவர்பால் உய்க்கும் பொய்த் தேவப் போலிகள் அறுவர் வேறு எனக்கூறப்படுகிறது. எனவே, இது அசலும் நகலுமான தெய்வப் பகுதிகளிற் சென்று சேரும் வணக்க வகையெல்லாந் தொக்கு ஒருங்குவரும் இச்சூத்திரந் கூறவேண்டுவது எழுவகையாகவும், ஆசிரியர் சூத்திரத்தில் அறுவகையென மறந்து கூறினரென ஆசிரியரைப் பழித்ததாகும்.

3. இன்னும், இயற்கை வகைப் பிறவித்தேவரன்றியும், பராவு வெறியான் மக்கள் தாமே “விகாரவகையான்” அமரராக்கிச் செய்யும் அறுவகை வாழ்த்துப் பெறவைக்கும் செயற்கைப் பொய்த்தேவப் போலிகள் ஈச்சினூர்க்கினியர் கூறுமாறு ஆறே எண்ணில் அமைவனவன்றே. புள், விலங்கு, ஊர்வன, ஆறு, மலை, மரம், செடி, கொடியாகிய பொருள்களில் வாழ்த்துக் கடியப்படுவ தொன்றேனு முண்டோ? பாம்பு, எலி, பருந்து, மயில், எருது, ஆல், வேல் அரசு அனைத்தையும் நாளும் நம்மவர் வணங்கக்காண்கிறோம். இது நல்ல வைதிக வழிபாடெனவே கருதப்படுகிறது. இவ்வழிபடு பொருள்களை மறக்கவும், புறக்கணித்து அவற்றிற்கு வழிபாடகற்றித் துறக்கவும், இவற்றின் வழிபாட்டை அனைவர்க்கும் விதித்து இவ்வுரைகாரருக்குமட்டும் விலக்கவும் வேதம் உரிமையேதுங் கூறிற்றுண்டோ? கீதையும் வேதமும் எப்பொருளுந் தெய்வமாகும், எதன் வணக்கமுந் தெய்வத்தின்பாற் சென்று சேருமென விளக்கியிருக்க ஈண்டுத் தேவர்கண் சென்று முடியும் வாழ்த்துப் பெறற் குரியனவாய்ப் பசு பார்ப்பாராதி ஆறினை மட்டும் ஈச்சினூர்க்கினியர் எடுத்துரைப்பின், அவ் ஆறு மட்டுமே வழுத்துதற்குரியன வென்பது தொல்காப்பியருக்கும் உடன்பாடெனக் கொள்ள நியதியுண்டோ?

4. இனி, வேதம் தமிழர் படிக்கொணாதாகவே, வேதமுடிவென உரைகாரர் கூறுவதெல்லாம் சரியெனத் தமிழ்கற்பார் கொள்ளவும், கொண்டு வாளா அமையவும் கடவரென ஈச்சினூர்க்கினியர் கருதினர் போலும்! அவர் இங்குக்கூறிய அறுவகையினவே தேவர்க்காம் வணக்கம் பெறற்குரிய வென்று எந்த வேதம் எப்பகுதியிற் கூறியுள்ளது? இதற்குத் தெளிவான வேதவாசகங் காட்டும் வரை இதுவே வேதமுடிவென்பது துணியப்படாததாகும்.

5. மேலும், ஆரியரின் வேதநூல் முடிவெதுவாயினும், அவற்றையெல்லாம் தொகுத்துக்கூற வெழுந்ததன்றே தொல்காப்பியம்? இங்கு இத்தமிழிலக்கண நூல் இப்புறத்தினைப் பகுதியில் தமிழர் மரபுகளைத் தொகுத்து விளக்குவதை யன்றே குறிக்கோளாகக் கொண்டுள்ளது. ஆகவே, ஆசிரியர் தெளிவாக ஆரியவேதக் கருத்துக்களைத் தாம் கூறுவதாகக் குறியாவிடத்தெல்லாம், அவற்றின் உண்மையையுத் தெளியாமல், வலிநிழுத்து இத்தமிழிலக்கணச் சூத்திரங்களுட் செறிக்கு முயற்சி ஆசிரியர் நூற்கருத்துக்கு மாறுவதுடன், பலவிடங்களில் பயனும் பொருளுமற்றதாகவும் முடியும்.

6. இனி, இச்சூத்திரம் ஒன்றனுக்கு இவ்விரு பேருரைகாரரும் தொடர்த்தொறுத் தொடர்பற்ற இருவேறு பொருள்குறிப் போவதும் சிந்திக்கத்தக்கது. உரைப் பொருள் ஒன்றேயாய், உரைவிளக்குந் திறம் வேறுபடுவதில்பு. இலக்கணச் சூத்திரத்தில் ஆசிரியர் நுதலிய பொருளும் அவர் கருத்தும் ஒன்றேயாதல் வேண்டும். இரு மறுதலைப்பொருள்களைத் தொல்காப்பியர் இவ்வொரு சூத்திரத்தில் கூறியிரார். ஆசிரியரின் உண்மைக் கருத்தையுணர்ந்த உரைகாரர் முற்றும் முரணும் இருவேறு பொருள்கள் ஒரு சூத்திரத்திற்குக் கூறுவது எப்படிக் கூடும்? எனினும், இங்கு இவ்விருவரும் ஒரு சிறிதும் தம்முள் ஒவ்வா வெவ்வேறு பொருள் கூறுவது வியப்பன்றோ?

(அ) இளம்பூரணர் இச்சூத்திரம் “கடவுட் புகழ்ச்சியன்றிப் பாட்டுடைத் தலைவனைச் சார்ந்தி வருதலையே கருதிந்” நென்பர். நச்சினர்க்கினியர் “மக்களோ விலக்கி, பிறப்பு வகை மெய்த்தேவரும் சிறப்பு வகைப் பொய்த்தேவுகளுமாக ிரி லும் பிரதிநிதிகளாகவும் மக்களின் வழிபாடு கொள்ளும் அசலும் நகலுமான தேவப் பகுதியொன்றையே இச்சூத்திரமும், தேவரைவிட்டு மக்கட்பகுதியை “வழங்கியன் மருங்கின்” என்னும் அடுத்த 27 ஆம் சூத்திரமுமே கூறுவதாகக் குறிக்கின்றார்.

(ஆ) இனி, மேலே விளக்கியபடி, “அமரர்கள் முடியும் அறுவகை” என்பதற்கு உரையாசிரியர்-மக்கட்பாடாணம் முடியும் தெய்வவணக்க வகையாறெனவும், நச்சினர்க்கினியர்-தாமே பாடாண்கொள்ள மக்களின் வணக்கம் பெறும் தேவர் வகை பிறப்பால் அசல் ஒன்றும், “வேதமுடிபான்” மக்கள் ‘விகாரவகையால்’ தேவ ராகுஞ்சிறப்பால் செயற்கை நகல் தேவுகளாறும் ஆகுமெனவும், வெவ்வேறு பொருள் கூறுவர்.

(இ) “புரைதீர்காமம் புல்லியவகை” என்பதனை இளம்பூரணர் “குற்றத் தீர்ந்த (ஐந்திணைதழுவிய அகமாம்) காமத்தைப் பொருந்திய வகை” என்பர். நச்சினர்க்கினியர் “தேவரிடத்தே மறுமைப் பயனான வீடுவேண்டாமல், உயர்ச்சி நீங்கிய இம்மைப்பயன் தரும் பொருள்களை வேண்டங்குறிப்புப் பொருந்தின பகுதி” என்கின்றார்.

(ஈ) இனி, “ஒன்றன் பகுதி ஒன்றுமென்ப” என்பதற்கு, இளம்பூரணர் “அவற்றுள் ஒரு கூற்றின் பாகுபாடு பாடாணத்தற்குப் பொருந்தும் என்பர்” எனப்

“பகுதி சுட்டியபொருள்” கூறுவர். நச்சினூர்க்கினியரோ “பாடாண்திணைப் பகுதியைத் தேவருமக்களு மெனப் பகுத்த இரண்டனுள் தேவர்க்குரிய பகுதியெல்லாந் தொக்கு ஒருங்குவருமென்று தொகுதி சுட்டியதாகக் கூறுவார் ஆசிரியர் ” என வுரை செய்வார்.

இவ்வாறு இம்மூன்றடிச் சூத்திரத்தில் இருவருரையுள் நால்வேறு மாறுபாடுகளுள். அடிதொறும் தொடர்தொறும் சொற்றொறும் இருவரும் வெதிரேசமாகப் பொருள் விரிக்கின்றனர். இதில் பின்னூரை வகுத்த நச்சினூர்க்கினியரே பெரிதும் பிறழ்ந்துரைப்பதாகத் தெரிகிறது. முன்னையோரனைவரையும் மறுத்து அவர் காணமாட்டாப் புத்துரைகளும் புதிய கருத்துக்களும் தாம் கூறி வீறுபெறுங்குறிப்பு ஒன்று, சேனாவரையர் பரிமேலழகர்களைப்போல விரிந்தாழ்ந்த வடமொழிப் பயிற்சியின்றியும் வடநூன்முடிபுகளாகவே தமிழ்ப்பேரிலக்கண நூற்கருத்துக்களைக்காட்டி மகிழுங்குறிப்பு ஒன்று, ஆகிய இவ்விருகோள்பற்றிய மனப்பான்மையால் தெளிவான ஆசிரியரின் சொற்களைத் திரித்தும் பிரித்துக் கூட்டியும் தமிழ்மரபுக்கு மாறான உரையே கூறி இவர் மயங்குவாராகின்றார்.

7. இங்கு இச்சூத்திரத்தில் முதலடியில் “அறுவகை” என்பதொன்றற்கு ஆசிரியர் கருத்தறியாமல் இளம்பூரணர் வேறுபொருள் கூறினர்; அஃதென்றிப் பிறிதனைத்திற்கும் தமிழ்மரபுபேணி உண்மையுரையே கூறிப்போனார். நச்சினூர்க்கினியரோ ஆசிரியர் கருத்தைமறந்து மரபுதுறந்து எல்லாவிடத்தும் பொருந்தாப் புத்துரை வகுக்க முயன்று முழுதும் வருவுவாரானார். ஈற்றடியில் “ஒன்றெனரு பகுதியே பாடாணுக்கு ஒன்று” மென்று தெள்ளத்தெளிக்குஞ் சொற்றொடருக்குத் “தேவர்க்குரித்தாம் எல்லாப்பகுதியுந் தொக்கு ஒருங்குவரு” மென்று விபரீதப் பொருள் கூறுதலும், “ஒன்று மென்ப” எனும் ஆசிரியர் கூற்றுத் தனக்குமுன்னாலாசிரியர் ஆன்ற பழந்தமிழ்வாணர் பலர் கூறுவரெனச் சட்டவும், ஒன்று மென்பார் ஆசிரியரேபோலப் பொருள் கூறுவதுமே நச்சினூர்க்கினியரின் மனப்பாங்கைக் காட்டுவதாகும்.

8. இன்னும், இவருரை பொருந்தாமை காண்பாம். தமிழிலக்கிய முழுதும் ஒன்று அகம் அன்றேல் புறமாக அமையும். அது மக்கள் வாழ்வு மனவியல்புகளோடு பொருந்தப் பத்தழகருடன் விளங்குஞ் செய்யுள்களாகவே முடிவதனாலும், அத்தமிழ்தூல் மரபுகளை வடித்தெடுத்துத் தொகுத்து இலக்கணங்கூறும் நூல் தொல்காப்பியம். நூலால் வீட்டிலக்கணங் கூறலாகாமை வெளிப்படடை. அறமும் இன்பமுமே மக்களால் மற்றைப்பொருளாகக் கொள்ளப்பெறுவன. பொருளாகக் முயற்சி யெல்லாம் இவ்விருபெரும் பொருளுக்கும் துணையும் தொடர்புமுண்மையான் எழுவனவாகும். அதனால் மக்கள் நுதலும் அனைத்துப் பொருளும் இன்பப் பகுதி தொக்க அகமும், அறப்பகுதி தொக்க புறமுமாயமையும்.

“ஆன்றசிதம்பிடி னறம்பொரு ளின்பமென
மூன்றுவகை நுதலிய துலகம். அவற்றுள்

அறமு மின்பமு மகலா தாகிப்

புறமெனப் படுவது பொருள்குறித் தன்றே”

என்பது பன்னிருபடலம். ஆகையால், தமிழிலக்கியப் பொருளாவன அகமும் புறமுமான இவ்விரண்டுமேயாம். ஆகவே, தமிழிலக்கண மெல்லாம், மக்கள் பொருளாகக் கருதற்கான இவ்விரண்டு கூறாகும். பொருட் பாகுபாட்டினையே கூறிப்போகும் இம்முறையில், பொருளதிகாரப் புறத்திணையிலக்கணப் பகுதியாகும் இச்சூத்திரமும் மக்கள் மரபு கூறுதலையே நுதலியதாகும். இவ்விலக்கணநூலில் தெய்வங்களைச் சுட்டும் பகுதிகளும் மக்களின்பால் முடிவனவேயாகு மல்லாமல் அறவே மக்களை விலக்கித் தெய்வப்பகுதி கூறுவனவாகா.

அன்றியும், தமிழ் நூற்களவில். அவையெல்லாம் அகமும் புறமுமாக மக்களைச் சார்ந்த பொருளையே கூறக் காண்பாம். புறத்திணையேழுநூள் பிறவெல்லாம் மக்கட் பகுதியின்பாற் படுவனவேயாக, பாடாண்டிணையொன்று மட்டும் தேவர் மக்களோடு சரியுரிமைப்பாத்தீடு பகருவானேன்? இலக்கணநூலா ரெதுகருதினும் இலக்கியங்களிற் பாடாண்பகுதியெல்லாம் மக்கள்மாட்டு அமைந்து முடிவனவாகவே காணப் பெறுகின்றன. மக்கள்பாற்சென்று முடியாமல், தனித்தேவர்மாட்டுப் பராவலன்றிப் பாடாணாக முடிந்த இலக்கியங்காணலரிது. இவ்வண்மைகருதியே பாடாணிலக்கணப் பகுதியில் பாடாண் பாட்டெல்லாம் மக்களையே சாருமேனும், அவற்றுள் கொடிநிலை, கந்தழி, வள்ளி கொற்றவள்ளை என்ற சில பாடாண் துறைகள் பாட்டுடைத்தலைமகளைச் சார்த்திவரும் புறத்திணைப் பகுதியாமேனும்; அப்படித் தலைமகளைச் சார்த்திவருமிடத்துக் கடவுள்வாழ்த்தொடு கண்ணிய(பொருந்த)வரும் என்புறனடை கூறப்பட்டுளது. பெரும்பாலும் கடவுள் கண்ணுத மக்கட்பாடாணுவதே மரபாகையால், கடவுள் கண்ணிய மக்கட்பாடாணுமுள வென ஆசிரியர் கூறல் வேண்டிற்று. எல்லாமேனும், பெரும்பகுதியேனும், மக்கட்சார்பற்ற கடவுளர் பாடாணாக முறையுண்டேல், இப்புறனடைச் சூத்திரம் வேண்டற் பாற்றன்றே. வழிபாடுங் காமமும் தமக்குத் தனியுரிமைகொள்ளும் கடவுளர்கண்ணதாகும் பாடாண் பகுதியை இங்கு “அமரர்கண் முடியும்” எனுமிச் சூத்திரங்கூறுவதாயின், பின்னர்ப் பாடாண் பகுதியில் கடவுளர்தொடர்பு காத்தமைக்க, “காமப்பகுதி கடவுளும்வரையார்” “கொடிநிலை கந்தழி” முதலிய புறனடைச் சூத்திரங்கள் மிகையாய் முடியும். அதனால் இச்சூத்திரத்தில் பின் புறனடைச் சூத்திரக் கருத்தொடு முரணது அமையும் வேறு செம்பொரு ளொன்றனை ஆசிரியர் கூறக்கருதினரென்பது பெறப் படுகின்றது. அப்பொருள் தமிழ்மரபு தழுவியதும் ஆசிரியர் தம் நூலிலேயே தெளியத் தெரிப்பது மாதல் வேண்டும். அவ்வமைவுடைப்பொருளைக் காணுவதே முறையா மாகையால், இனி அதனை ஆராய்வோம்.

ஆசிரியர் புறத்திணைப் பகுதியிற் கையாளுமுறை கவனிக்கத்தக்கது. திணை தொறும் முதற்கூத்திரத்தில் இஃது இன்ன அகத்திணைக்குப் புறமாகும், இத்திணை இத்துணைத் துறைத்தொகை கொள்ளுமென்பர். அடுத்த சூத்திரத்தால் அத்திணை

யிலக்கணம் இணைத்தென விளக்குவர். பிறகு அத்திணை துறைகளை வகுத்து விரிப்பர். ஆசிரியர் வெட்சிமுதல் காஞ்சிவரை யெடுத்தாண்ட இம்முறை இவ்வியலினி றுதியில் இப்பாடாண் பகுதியிலும் பயிலப்படுவதில்பே. ஆகவே, முன்னே :—

“பாடாண்பகுதி.....நாலிரண்டுடைத்தே” எனப்பாடாணாக் கெதிராம் அகத்திணையும் அதன் துறைத்தொகையும் கூறினர்; இங்கு இவ்வெடுத்த சூத்திரத் தில் பாடாணிலக்கணம் பகருகின்றார். இலக்கணம் அதிவியாத்தி அவ்வியாத்திக ளுக்கிடனின் நியமைய வேண்டும். உரைகாரர் கொள்கைப்படி இச்சூத்திரம் இவ் விருவகைக் குற்றமற்ற இலக்கணமாயமையாது. அவர்கள் கூறும்பொருளால் பாடாணாகும் எல்லாப்பகுதி யிலக்கணமும் இதிலடங்கவில்லை. ஒரு பகுதியான கட வுளர்வகை யிலக்கணங்கூட இதில் முற்றும் அடங்காமலும் இத்னை யுடன்தொட ராமலும் பின் வேறு இருசூத்திரம் வேண்டுவதாகும். மேலும், பாடாண், வழக்கில் பெரும்பாலும் மக்களைச்சார்த்தி நடப்பதாகவும், நச்சினுர்க்கிரியர் கொள்கைப்படி தேவர் பகுதிக்கு ஆசிரியர் இதுவும் பின்னிரண்டுமாக மூன்று சூத்திரங்கள் வெவ் வேறிடங்களிற் கூறிவிட்டு, மக்கட்பகுதியிலக்கணத்தைத்தான் சுட்டியதோ எனத் துணிந்து தெளியக்கூடாத “வழுங்கியன் மருங்கின்” எனுமொரு சூத்திரத்தில் மக் கட்பாடாண் இலக்கண முழுதும் விரித்தனரெனல் பொருந்தாது. இப்பாடாண் திணையிலக்கணத்தை மட்டும் ஆசிரியர் இவ்வியலில் சுண்ணம்போலச் சிதறக்கூறின ரென்பதும் பொருத்தமில்லை. அதனால் ஆசிரியர் மற்றப்புறத்திணைகளுக்குக்கொண்ட செம்முறையே இதற்குங் கொண்டு இச்சூத்திரத்திற் பாடாணிலக்கணத்தைச் சுருக்கி உலப்பற உரைத்தமைத்தா ரென்பதே சாலப்பொருந்துவதாகும். ஊன்றி நோக்கின் இதுவே உண்மையென உணரலாகும்.

(தொல்காப்பியர்) “நூலகத்து (பொருளதிகாரம்) விரித்துக்கூறிய பொருள் யாதெனின் (அகமாகிய) காமப்பகுதியும் (புறமாகிய) வீரப்பகுதியுமென்க” என்று இளம்பூரணர் கூறுமாறு; அகத்திணையெல்லாம் பால்பற்றிய அன்பு அல்லது காமப் பகுதி குறிப்பனவும், புறத்திணையெல்லாம் வீரம் வெற்றி பகைவரைப் போர் தொலைத்தல் முதலிய மறம்படு துறைகளையே குறிப்பனவுமாகும். ஆகவே, தமிழி லக்கணம் நுதலிய பொருளெல்லாம் அகமும் புறமுமாயடங்கும். அகமனைத்தும் காமம் புல்லிய பலதுறைப்பகுதியவாம். இவற்றைக் கைக்கிளைமுதல் பெருந்திணை யிறுவாய்த் திணையேழாக்கி அகத்திணையியலில் ஆசிரியர் விளக்கிப் போந்தார். பின்னர் அதுவேபோல் வீரம்பற்றிய புறப்பகுதியினைத்தையும் இப்புறத்திணையி லில் புறத்திணையேழுனை அவர் வகுத்துக்கொண்டார். அவற்றுள் வெட்சிமுதல் காஞ்சியீரகக்கூறிய ஆறு புறத்திணைகளும் பொருநர் அல்லது வீரர்பால் சார்ந்தே முடியுமென்பதை அவற்றினிலக்கணம் விளக்குஞ் சூத்திரங்களால் விளங்க வைத்தார். புறத்திணைவகை கூறுவனவாக இளம்பூரணர் புறத்திணைப்புறவுரையி ல் எடுத்துக்காட்டும் பழைய சூத்திரங்களும் இக்கருத்தையே வலியுறுத்தா

“அவைதாம், வெட்சி கரந்தை வஞ்சி காஞ்சி
உட்குவரு சிறப்பி னுழினை நொச்சி
முரண்மிகு சிறப்பிற் றும்பையுள்ளிட்ட
மறனுடை மரபி னேழே யேனை
அமர்கோண் மரபின் வாகையுஞ் சிறந்த
பாடாண் பாட்டொடு பொதுவிய லென்ப.”

“பல்லமர் செய்து படையுட் டப்பிய
நல்லாண் மாக்கள் எல்லாரும் பெறுதலின்
திறப்பட மொழிந்து தெரிய விரித்து
முதற்பட வெண்ணிய எழுதினைக்கு முரிக்கீத.”

தமிழ் மரபுகூறும் இப்பழைய மேற்கோள் பலவும் புறத்திணைகள் “மறனுடைமரபின்”, “அமர்கோண் மரபின்”, “வீரப்பகுதிய” எனவே பேசுவதாலும் இவ்வுண்மை தெளியப்படும். ஆகவே, அகமெல்லாம் நாமம்புல்லிய வகையும், புறமெல்லாம் “மறனுடை” “அமர்கோண் மரபின்” வகையுமாயடங்கும். இவ்வாறு அகம்புறமெனும் இருதிறம்படு திணைகளின் பலதுறைப்பகுதியுள், டீடுடையார் பாடு கூறற்கமைவது எதுவோ அதுவே பாடாண் எனப்பெறும்.

பாடாண்டிணை தனக்கெனத்தனிநிலம் படைக்கப்பெற்றிலது; அகமும் புறமுமாகும் பிறதிணைத் துறைகளைத் தையுமே தனக்கு நிலைக்களனாகப் பெற்று நிற்கும். இலக்கியங்களிலும், உரைகாரர் காட்டும் உதாரணங்களிலும் வெட்சிப்பாடாண், வஞ்சிப்பாடாண், உழினைப்பாடாண், தும்பைப்பாடாண், வாகைப்பாடாண், காஞ்சிப்பாடாண் எனப்பிற புறத்திணை ஆறனடியாக வரும் அறுவகையும், கைக்கிளைப்பாடாண், கற்புப்பாடாண், அன்பொடு புணர்ந்த ஐந்திணைமருங்கிற் நாமப்பாடாண்; என அகம்பற்றி யெழுவனவாம் ஒருவகையுமாய்ப் பாடாண் பகுதியினைத்தும் அடங்கக் காண்போம். இவையன்றிப் பிறிதுவகைப் பாடாணெதுவுங் கருத்த்கில்லை. பாடாணெனவே, பாட்டுடைத்தலைவர்தம் டீடு அல்லது பெருமை கூறுதலே இத்திணையின் குறிக்கோளாகும். “பெருமை தவிர்க்குந் துறையெதுவும் பாடாணாதற்கில்லை. ஆகவே, அகப்பகுதியில் நோத்திறமாம் இழிகாமப் பெருந்திணை யாண்டும் பாடாணெனப்படாது. பிற அகப்பகுதியினைத்தும் புறத்திற் பாடாணாதற்குரியவாம். இக்கருத்தானே “புறத்திணை மருங்கில்” எனும் அகத்திணையியல் இறுதி (58-ம்) குத்திரத்தின்கீழ் இளம்பூரணரும் “புறத்திணையுள் பாடாண்பாட்டும் அகமாம் நற்காமம் பொருளாக வரும்” என விளக்கியுள்ளார். எனவே, இவ்வாறகப்பகுதிப் பொருள்களுள்ளும் அமைவதைக் களனாக்கொண்டு பாடாண்திணை சமையுமெனல் பாடாண்டிணைக் குரியவும் போதியவுமான இலக்கணமாகும். இவ்விலக்கணத்தையே புறத்திணையிலிறுதியில் பாடாண்பகுதி கூறும் குத்திரமும் விளக்குவதாகும்.

இனி இச்சூத்திரத்தைக் கண்ணழித்து உண்மைப்பொருள் தெளியுமுன், இங்குக் கவனிக்கத்தக்கது இன்னு மொன்றுளது. “அமரர்” என்னுஞ் சொல் தேவரையே குறிப்பதெனக் கொள்ளவேண்டா. அவ்வாறு கொண்டதுதான் உரைகாரரை ஆசிரியரின் உண்மைக்கருத்தையும் தமிழிலக்கணமரபையும் பாடாணிலக்கண வியல்பையும் நினையாமல் மறப்பித்து இச்சூத்திரத்துக்குப் பொருந்தாப் புத்துரை கூறப்பண்ணியது. ஒரு சொல்லின் பல பொருள்களில், இடத்தொடும் ஆசிரியர் நுதலிய பொருளொடும் பொருந்துவதொன்றை ஆய்ந்தெடுத்தாளுவதே அறிவுடைமைக்கு அவதியாகும். “அமரர்” என்பது ‘அமர்’ என்பதனடியாகப் பிறந்த குறிப்புவினைப்பெயர். ‘அமர்’ என்பது போட்டி-போர் எனும் பொருளில் வரும். அதனால் “அமரர்” என்பதும் வீரர் அல்லது பொருவோர் எனப்பொருள்படல் இயல்பாம். இதுவே மிகப்பொருந்துஞ் செம்பொருளாம். தேவரை அமரர் எனல் வடமொழிவழக்காதலால் அப்பொருளிலும் இச்சொல் கடியப்பெறுது. பொருந்துழி அப்பொருளுங் கொள்ளத்தகும். எனினும், இச்சொல்லின் முதனிலைப் பொருளோடு பொருந்த வீரர்—பொருவோர் எனும் நேர்பொருள் பொருந்து மிடத்தும் இச்சொல் யாண்டும் தேவரையே சுட்டுவதாகக் கொள்ள நியமமில்லை. அன்றியும், “அடையலர் பெயருந் தேவரு மமரர்” எனப் பிங்கலத்தை இச்சொல்லுக்குத் தரும் இருபொருள்களுள் முதற்கண் அடையலராகிய வீரரைச் சுட்டதலும் ஈண்டு உற்று நோக்கத்தகும். இப்பாடாணிலக்கணச் சூத்திரத்தின் முதலடி ஆதியில் “அமர்க்கண முடியும் அறுவகையானும்” என்றிருந்து, பின் சுவிடி பெயர்த்தெழுதுவோரால் பாடந்திரிந்து “அமர்க்கண முடியும் அறுவகையானும்” எனமாறிந்றே ஐது மையமும் நிகழலாம். பன்னிரு படலத்தில் புறத்திணைகளெல்லாம் “அமர் கொண் மரபின” எனப் பெறுவதனோடு இப்பாடம் ஏற்புடையதாகும். இனி இதைவிடுத்து இப்போதிருப்பதே சரியான பாடமெனக் கொள்ளினும், புறத்திணைகளின் பான்மை பன்னிருபடலச் சூத்திரம் விளக்குவதேயாமாகையால் அதனோடு முரணாது அமையும் பொருள் இப்பாடாண் சூத்திரமுதலடிக்கும் பொருந்துமெனக் கொள்ளுதலே முறையாகும். இனி இப்பாடாணிலக்கணச் சூத்திரத்தை நின் தவாறு கண்ணழித்துச் செம்பொருள்காண் முயல்வோம்.

பாடாணிலக்கணங் கூறுமிச்சூத்திரப் பொருளாவது :—

“அமர்க்கண முடியும் அறுவகையானும்”=வீரர் அல்லது மறனுடைப் பொருள்பால் சென்று அமைவனவாக ஆசிரியர் மேலே விரித்துத்தேரித்த வெட்சி முதல் காஞ்சியீருள புறத்திணைவகை ஆறனும்; “புரைதீர்காமம் புல்லியவகையினும்”=குற்றமற்ற அகப்பகுதியாம் அன்பனைந்த காமவகையானும்; “ஒன்றன் பகுதி ஒன்றும் என்ப”=இயல்பான அகப்புறத்திணை வகைகளில் இதற்கு அமைவதான ஒரு கூற்றின் பாதபாடு பாடாணாதற்குப் பொருந்துவதாகும் என்று தமிழாசிரியர் கூறுவர்.

இதுவே இச்சூத்திரச் சொற்றொடர் சுட்டும் செம்பொருளாம். சுருங்கக் கூறின், இச்சூத்திரக்கருத்தாவது குற்றமற்ற அகத்திணைப் பகுதிகளிலும், புறத்

தில் இதற்குமுன் மேலே கூறிமுடித்த ஆறுதிணைப்பகுதிகளிலும் பாட்டுடைத் தலைவரின் பீடு அல்லது பெருமை பேசற்கு இடனாயமையு மெனைத்துவகையும் பாடாணுகமுடியும்—என்பதே. மேலே வெட்சிமுதற் கூறிய புறத்திணைகள் ஆறும் அமரர் வீறு கண்ணியனவையாம். அகப்பகுதிகளில் “கோந்திறமாய் இழிந்தாரிடத் தன்றி மேலோர்க் காகாப்பெருந்திணை” பொருந்தா இழிகாமமாகையால், அது பெருமைப்பெற்றிப் பேசும் பாடாணுக்குவாது. எனவே, இக்குற்றமுடைய பெருந்திணையவிலக்கி, எவ்வகையிலுங் குற்றமற்ற ‘அன்பொடு புணர்ந்த’ களவு-கற்பு—“செந்திற்கக் கைக்கிளை” யாதிய மற்றைக்காமப் பகுதியினைத்தும் பாடாண்டிணையின்பாற்பட்டு அமைவதாகும். இவ்வகப்புறத்திணைப்பகுதிகளுள்ளும் எல்லாம் பாடாணெனக் கொள்ளல் கூடா. இவற்றுள் பாடாணாயமையும் வகைகள் அல்லது கூறுபாடுகள் மட்டுமே பாடாணாகு மென்று ஆசிரியர் இச்சூத்திரத்தில் விளக்கினு ராவர்.

இனி, அகப்பகுதியில் இவ்வாறே ஆசிரியர் கருத்தறியாமல் உரைகாரர் மயங்கப் பொருள் கூறுமிடங்களிற் சிலவற்றையு மிங்குக் குறிப்பாம் :—

II. பொருள்திராரம் - தனவியல் - சூத்திரம் 13.

“ பாங்கர் நிமித்தம் பன்னிரண்டென்ப ”

இது இளம் பூரணத்திலுள்ளது. நச்சினர்க்கினியர் இதில் பன்மையை ஒருமையாக்கி, “ பாங்க நிமித்தம் பன்னிரண்டென்ப ” எனப்பாடங்கொண்டு, பொருளும் சிறிது மாற்றிக்கூறினர். இருவருரையும் ஆசிரியர் கருத்தொடு பொருந் துவதாயில்லை எனத்தெரிகிறது. முதலில், பன்னிரண்டாவன இவையெனத் தொல்காப்பியர் யாண்டுக்கூறினர் என்பதை இரண்டு உரைகாரருமே சுட்டினர். இலக்கணநூலில், ஆசிரியர் தாம் நுதலிய பொருளை இளைத்தெனத்தெளிவியா திரார். படிக்கும் பலரும் பலவாறு திரியக்கொள்ளவைப்பது இலக்கணநூலில் இழுக்காகும். ஈண்டு இளம்பூரணர் கொண்ட 12-உம், நச்சினர்க்கினியர் கூறும் 12-உம், தம்முள் வேறுபடுகின்றன. இவருள் இளம் பூரணர் முதலில் உரைகண்ட வர். இருவரும் இருவேறு 12 நிமித்தம் வகுத்தெண்ணச் சூத்திரம் இடந்தராது. இருவரில் ஒருவரேனும், இருவருமேனும் தவறாகக் கூறினராதல் வேண்டும். இருவர் கூற்றும் ஆசிரியர் கருத்தாயமைதல் கூடாது.

இனி, யாண்டும் இவ்வீருரைகாரரும் ஆசிரியர் வகுத்து 12 நிமித்தங்கூறிய இடத்தையேனும், ஆசிரியரே சுட்டிய நிமித்தப்பெயர்களையேனும் காட்டவுமில்லை. எனவே, இனி மூன்றாவ தொருவர் முன்னிருவரும் கூறாத புதிதாக பன்னிரண்டு நிமித்தங்களையே இச்சூத்திரக் கருத்தாகக் கூறவுங்கூடும். ஆசிரியர் நுதலிய 12 யாவை எனமுடிவு காண்பதெப்படி ? இவ்வாறு ஐயத்திற்கிடனாகச் சூத்திரித்தார் என்பது நூலியல்புக்கும் ஆசிரியர் பெருமைக்கும் பொருந்தாது.

[N. B. இதில் வரும் சூத்திர எண்கள் நச்சினர்க்கினியர் உரையில் தரும் எண்களாம்.]

இரண்டாவதாக, களவியற்றொடக்கத்தில் வரும் இச்சூத்திரத்தில் கற்பின் பாற்படும் கூட்டங்களை ஆசிரியர் கூறினாரென்பது கொள்ளற்பாற்றன்று. இரண்டு உரைகாரருமே எட்டு மணத்தையும் ஈண்டுத்தொல்காப்பியர் கருதி இச்சூத்திரமியற்றியதாகக் கொள்ளுகின்றனர். இது ஆசிரியர் கற்பிலக்கணங்களைப் பின்வெறியலாக்கி இங்குக்களவிலக்கணம் கூற எழுந்த இவ்வியலுக்கும் தூற்போக்குக்கு மியைவதன்று.

இனி, பைசாசம், இராக்கதம், ஆசரம்போன்ற பல கூட்டங்களும் இடையே பாங்கரை இன்றியமையா நிமித்தமாகக் கொள்ளவேண்டுவனவுமல்ல.

அதான்று, அவை களவியலில் இலக்கணங் கூறப்பெறக் காரணமுமில்லை.

இன்னும், களவின் பகுதியாகிய உடன்போக்கைக் களவின்வேறாய் விதந்தோதி வேறெண்ணலும், கற்பின் பகுதிகளான பல கிழத்தியரையும் பரத்தையரையும் கூடங் கூட்டங்களை யெல்லாந் தனிவேறெண்ணிக் கூட்டலும், கற்பை இக்களவியற்பகுதியி லிழுத்தெண்ணலும் பொருத்த மின்றும். இவ்வாறு பிரித்துக்கட்டி டிஹலன்றி இளம்புரணருரையில் நிமித்தம் 12 நிரம்புமாறில்லை.

அஃதேபோல், ஈச்சினார்க்கினியத்தில் களவினைநினைவை ஐவகையாக்கியதும், அவற்றொடு களவுக்கு ஒப்பான கந்தருவத்தை நீக்கி மற்றை மறையோர்தேயத்து மன்றலெனும் எழுங்கூட்டிப் பன்னிரண்டாக்குவதும் பொருந்துவதன்றும். அன்றியும், எல்லாநிலத்தும் புணர்ச்சி நிகழுமேனும் எல்லாத்திணையுங்கூட்டமாகா. கூட்டத்திற்கு வேண்டப்படும் பாங்கன் நிமித்தம் பன்னிரண்டும் இரங்கல், இருத்தல், பிரிவு என்பவற்றுள் இடம் பெற்றகில்லை. இவைகளை யெண்ணிக் கூட்டிப் பன்னிரண்டாக்கிக் களவுக்கூட்டத்திற்காம் நிமித்தம் இவையெனல் பொருந்தாது. அன்றியும், ஈச்சினார்க்கினியர் கூட்டத்திற்குரிய பாங்கரெல்லாம் பார்ப்பனப் பாங்கராகக் கொண்டதற்கும் நியமமில்லை.

கடைசியாக, பிரமமுதல் பைசாச மிறுதியாக எண்ணப்படும் எட்டும் ஆசிரியர் தூலில் மக்களுள் நடக்கக்கூடியனவாகக்கண்ட கூட்டமன்றி, அவையெல்லாம் வதுவை மணமாகா. என்தையினும் அவற்றைத் தமிழரின் அன்பிற்சிற்ற்த காமக்கூட்டத்தொடு இணைத்தெண்ணவும், அவற்றிற்காவனவற்றைக் களவுக்கூட்ட நிமித்தங் கூறுமிடத்து ஆசிரியர் கூறக்கருதினாரென்றெண்ணவும், பாயிரத்தானும் தூற்போக்கானுந் துணியப்பட்ட ஆசிரியர் நோக்கம் இடந்தாது. ஆகவே, ஈண்டு இவ்வரைகள் தவறாதல் வெளிப்படை. அதனல் ஆசிரியர் சுட்டியநிமித்தமாவன பன்னிரண்டும் யாவையென ஆய்ந்து தெரியற்பாற்றும். அவை யாவையாயினும், ஆசிரியர் தூலிலே கூறப்பட்டவையாகவே இருத்தல் வேண்டும். நுதலிய பொருளிலக்கண முழுவதும் ஒரு சூத்திரத்திலேயே உரைத்துத்தீரவேண்டுமெனும் நியதியில்லை. ஒன்றில் தொகையும் மற்றொரு சூத்திரத்தில் அதன் வகையுங்குறிப்போதல் ஆசிரியர் முறையென்பதைத் தொல்காப்பியத்திற் பலவிடத்துங் காணலாம். ஆனால், தாம் நுதலிய தொகையின் வகைவிரததைத் தாமே வகுத்து விளக்காமல், பிறர்

மயங்கவும் மாற்றிக்கூறவும் இடம்வைத்து வகையே கூறாதொழிவது ஆசிரியர் தூலில் யாண்டுங்காண்டற்கில்லை. ஆதலால் இங்கு அவர் தொகை பன்னிரண்டெனச் சுட்டிய பாங்கர் நிமித்தங்களின் வகைவிவரமும் இச்சூத்திரத்தை யடுத்தே ஆசிரியர் கூறிவைத்திருப்பர் எனக்கருதுவது தவறாகாது. இந்நினைவோடு துருவிப் பார்த்தால் இதற்கு முன்னதற்கு முன்னைய சூத்திரத்தில் இப்பன்னிரண்டும் வேறு சில நிமித்தங்களுடன் சேரக்கூறப்பட்டிருப்பதைக் காணலாம்.

களவியலில் இதற்குத் தொடர்புடையதாய்ச் சிறிது முன்னின்ற 11-ஆம் சூத்திரம்

“ மெய்தொட்டுப் பயிறல்..... ”

மடன்மகூறு மிடனுமா ருண்டே ”

என்பதாகும். இதில் இயற்கைக் கூட்டம். இடந்தலைப்பாடு, பாங்கற் கூட்டம், பாங்கியிற் கூட்டம் எனும் “காவிற்கூட்டம் நான்கினும்” சென்று அமையும் நிமித்தங்கள் நிரல்பட விளக்கப்பெறுகின்றன. இதில் கூறப்பட்ட இருபதனுள் “மெய்தொட்டுப் பயிறல்” முதல் “தீராத்தேற்றம்” வரையெண்ணிய “இருநான்கு கிளவியும்” இயற்கைக்கூட்டம் இடந்தலைப்பாடு என்னும் இவ்விரண்டன் பகுதிய வாம். அடுத்த நான்கும் பாங்களுந்கூடும் கூட்டத்திற்கும், இறுதி எட்டும் பாங்கியிற் கூட்டத்திற்குமாகப் பன்னிரண்டு நிமித்தங்களும் ஆசிரியர் விளக்கியுள்ளார். இதுவே ஆசிரியர்கருத்தும் அவர்கொண்ட முறையும் என்பது. இச்சூத்திரங்கூடும் நிமித்தங்கள் இருபதில் பாங்கர் நிமித்தமாகாதனவற்றை “இருநான்கு கிளவியு ” மெனமுதலில் ஆசிரியர் தொகை கூறிப்பிரித்தமையானும், அவைகீக்கி எஞ்சியவற்றையே “பாங்கர் நிமித்தம் பன்னிரண்டென்ப” எனப் பின் 13-ஆம் சூத்திரத்தால் தொகுத்துக் கூறினமையானும், எல்லாவுரைகாரரும் இந்த 11-ஆம் சூத்திரத்தின் கீழ்ப் பாங்கன்பாங்கிகளான இருவகைப் பாங்கர் நிமித்தம் இப்பன்னிரண்டாகவே உடன்பட்டுக் கூறுதலானும் தெளிவாகின்றது. ஆகவே, பாங்கன் பாங்கிகளாலாய் கூட்டத்திற்கான நிமித்தம் பன்னிரண்டும் இச்சூத்திரத்தில் “பாங்கர் நிமித்தம் பன்னிரண்டென்ப ” எனத்தெளிக்கப் பட்டுள்ளன. இவை மற்றைய இயற்கைக் கூட்டம் இடந்தலைப்பாடுகளின் நிமித்தம் எட்டினோடும் இங்குச்சேர்த்துக் கூறப் பட்டு எல்லாம் தலைவன் கூற்று நிகழ்தற்கிடனாகுமென்று பொதுப்படக்கூறியதனால், இதில் ஆசிரியர் பாங்கன் பாங்கியிருவராலாங் கூட்டங்களுக்கு வரும் நிமித்தங்களைப் பிரித்து, முன்னேச் சூத்திரத்திற் கூறிய இருபதனுள் “பாங்கர் நிமித்தம் பன்னிரண்டென்ப” எனத்தனியே வேறுதொகுத்து இச்சூத்திரத்தில் விளக்கிப் போந்தார். எனவே, இக்களவியல் 13-ஆம் சூத்திரத்தில் ஆசிரியர் தொகுத்துக்கூறிய பாங்கர் நிமித்தம் பன்னிரண்டாவன, முன்னைய 11-ஆம் சூத்திரத்துப் பிற்பகுதியில் “பெற்றவழி மகிழ்ச்சியும்” என்பது முதல் “தோழி, நீக்கவினாகிய நிலையுநோக்கி, மடன்மகூறு மிடனுமாருண்டே ” என்பதீருகவகுத்து விளக்கிய

பன்னிரண்டுமேயாம் என்பது அங்கை நெல்லிபோற் சங்கையறத் தெளியக்கிடைக்கின்றது.

ஆசிரியர்க்கு இதுகருத்தாமேல், வகைகூறிய முன்னைப் பதினோராஞ் சூத்திரத்தை ஒட்டி இத்தொகைச் சூத்திரத்தை நிறுத்தாமல் இடையே பிறிதொரு சூத்திரம் வரவைத்தது ஏனெனில், கூறுவன். “மெய்தொட்டுப்பயிறல்” என்னுஞ் சூத்திரம், நால்வகைக் களவுக்கூட்டரிமித்தங்களை வகுத்துக்கூறினும், அவையெல்லாம் தலைவன் கூற்று நிகழ்த்தக் கிடனாறு கூறுதலை நுதலிற்று. தலைவன் கூற்று நிகழ்த்தக்கேதுவாய் பிறசிலவும் ஈண்டுத் தொடர்புடைமைகருதி “பண்பிற் பெயர்ப்பினும்” எனும் சூத்திரத்தில் அவற்றையும் இகனையடுத்துத் தொகுத்துவைத்தார். அதன் பின் முன்னைய சூத்திரத்தில் தலைவன் கூற்றிற்கிடமாயவற்றையெல்லாம் வகுத்து விளக்கியதனால், அவற்றில் பாங்கர் நிமித்தமாவன பன்னிரண்டே எனத்தெளித்தற்கு இத்தொகைச்சூத்திரம் கூறினர். அன்றியும், பாங்கன்-பாங்கி களினிமித்தங்களான இப்பன்னிரண்டனுள் முன்னைய மூன்றும் கைக்கிளைக்கும், பின் இறுதிய நான்கும் பெருந்திணைக்கும் பொருந்தற்பால எனவும், இடையைந்தும் எஞ்ஞான்றும் ஐந்திணைக் களவுக் கூட்டத்திற்கே யாமெனவும், இவற்றிற்கியைவதோர் சிறப்பிலக்கணமுமிருத்தாம் கூறுகின்றாராகவின், அதற்குமிப்பாங்கர் நிமித்தம் 12 எனுந்தொகை பிரித்து முன்கூறவேண்டினராசிரியர். இவை பலவும் செவ்வனே சொல்லமைதியும் சூத்திரத்தொடர்புங்கருதி உய்த்துணருங்கால், இச்சூத்திரங்களுக்கு இளம்பூரணரும் நச்சினர்க்கினியரும் கொண்ட உரை, ஆசிரியர்கருத்தாகாமை தெளிவாகும்.

களவியற் சூத்திரம்—14 - 15.

“முன்னைய மூன்றுங் கைக்கிளைக் குறிப்பே
பின்னர் நான்கும் பெருந்திணை பெறுமே”

“முதலொடு புணர்ந்த யாமோர் மேன
தவலருஞ் சிறப்பி னைநிலம் பெறுமே”

இவற்றுள் முதலதற்குப் பழைய உரைகாரர் இருவரும், மறையோர் தேய்த்து மன்றல்களான பிரமம், பிரசாபத்தியம், ஆரிடம், தெய்வம், காந்தருவம், ஆசரம், இராக்கதம், பைசாசம் என்ற எட்டனுள் பிரமமுதல் தெய்வமீறாகவுள்ள நான்கும் பெருந்திணை கொள்ளும் எனவும், இறுதிமூன்றான ஆசரம், இராக்கதம், பைசாசங்கள் கைக்கிளைக்குறிப்பாமெனவும் பொருள் கூறினார். இதுபொருந்தாது.

(1) முதலில் இவ்வெட்டுக் கூட்டங்களையே ஈண்டுக்கருதுவதான குறிப்பு ஆசிரியர் கூற்றிலில்லை. இரண்டாவதாக, தமிழரின் களவிலக்கணப் பகுதியில் களவுக்கூட்டம் நால்வகை கூறி, அவற்றினிடைத் தலைவன் கூற்று நிகழ்த்தகான நிமித்தங்களை முன் 11-ஆம் சூத்திரத்தில் விளக்கிப் பின் 16-ஆவது சூத்திரத்தில் தலைவி

கூறறுக் கூறுமாசிரியர் இவற்றினிடையில் தமிழ் நாட்டிற்குச் சம்பந்தமில்லாத வடநூல்களில் வரும் எட்டுக் கூட்டத்தை இழுப்பதற்கு இயையும் அவசியமில்லே எடுத்தானும் பொருளுக்கு இன்றியமையாத தொடர்புடைய வல்லாத வடநூற் கூட்ட மெட்டினையும் குறிக்கவிரும்பி யிருப்பின், ஆசிரியர் அதனைவிடுத்து கூறி விளக்கி யிருப்பார். அவ்வாறு தம் விருப்பை விளக்காமலும், “முன்னைய மூன்று,” “பின்னர் நான்கு” என இங்குத்தாம் சுட்டுபவையெவை? எவற்றனுள் இவற்றைத்தாம் பிரித்துக் கூறியது? என்பவற்றைத் தெளிவாக்காமலும், வாளா முன் மூன்று பின் நான்கு எனுந்தொகையளவில் நிறுத்தி அவற்றின் வகையை விளக்காமல், மயக்கத்திற்கும் வேண்டியார் வேண்டியாங்கு விரித்தற்குக் களனாகவும் ஆசிரியர் தம் அரிய இலக்கணநூலில் இடந்தருவாரல்லர். ஆதலால், நண்டு மூன்று நான்கு எனத்தொகுத்தவை ஆசிரியரே வகைவிரித்து விளக்கியுள்ளவற்றைக் குறிப்பனவாகக் கொள்ளுவதே மரபும் முறையுமாகும்.

(2) இனி, இவ்வாரியநூற் கூட்டமெட்டினையே குறிப்பதாகக் கொள்ளினும், அவற்றுள் முதலி லெண்ணப்பெறும் பிரமம், பிரசாபத்தியம், ஆரிடம் என்ற மூன்றைக் கைக்கிளையாகவும், பின்னான்கான தெய்வதம், காந்தருவம், ஆசுரம், இராக்கதம் என்பவை பெருந்திணையாகவுங் கொள்ளல் வேண்டும். இவைதாம் இவ்வெட்டனுள் முன்மூன்று, பின்னான்கு என வரிசையில் எண்ணற்குரியவாகும். இதனைவிட்டு, இறுதி மூன்று கைக்கிளே முதலில் நான்கு பெருந்திணை என, ஆசிரியரின் விசதவாக்குக்கு விரோதமாக மாற்றிக்கூற நியாயமில்லை. நியலே இவ்வரிசையில் இவற்றை யமைத்துக் கூறுவதிலேற்படும் சில அசங்கதங்களை விலக்கவேண்டி உரைகாரர் தமது இயையாவுரைக்கு அமைய அமையாவரிசை முறைமாற்றிக் கூறலானார்.

(3) இனி, புணர்ந்து முடியுமண மெட்டனுள் எதையும், புணர்ச்சிபெறாதும் பெறுதலொண்ணாததுமான கைக்கிளே யாக்குவது, தமிழ் மரபுக்கும் தொல்காப்பிய இலக்கணத்திற்கும் முற்று முரணாகும். கூட்டம்பெறாத வரையே கைக்கிளையாம். கூட்ட மெதுவாயினும், அது ஒன்று அன்பிற் கூட்டமான களவு, அல்லது பெருந்திணையாவதன்றிக் கைக்கிளையாகக் கொள்ளுமாறில்லை. ஆகவே, அவ்வாறு கோடல் ஆசிரியர் கருத்தாகாது.

(4) இன்னும், முதல்மூன்று ஈற்று நான்கு என்றமல் சூத்திரத்தில் வாளா “முன்னைய மூன்று பின்னர் நான்கு” எனவே கூறப்படுவதனால், மூன்றும் நான்கும் ஏழேயாக, எட்டெண்ணுடைய வடநூல் கூறுங்கூட்டங்களை இங்குச்சட்டித்தீர வேண்டிய நியதியில்லை. இவை யெட்டும் மணமெனக் கருதுதற்குரியவாமல்ல. சிலவே குற்றமற்ற மணமும், வேறு சில வெறுக்கத்தக்க பாவக்கூட்டமுமாகும். வடநூல்களும், இவ்வெட்டினையும் கொள்ளற்குரிய வதுவை முறைகளாகக்கூறவுமில்லை; மக்களுள் நிகழக்கூடிய கூட்டங்களாக மட்டும் சுட்டுகின்றன. எனவே, சூத்திரத்திற்கு கவசியமான ஏழுண் கொள்ளும் எழுபிறப்பு, எழுதீவு, ஏழுலகமாதியவற்றுள் ஒன்

றைக்கூறி இச்சூத்திரத்தொகை எண்ணை யமைத்தல் கூறுவதாகவும், இவற்றையெல்லாம் விலக்கித் தமிழ் மரபாகாத ஆரியநூலிற் காணப்பெறும் எட்டுவகைக்கூட்டங்களை, ஆசிரியர் எனைத்தானும் அக்கருத்தைக் குறியாசிருக்க, இத்தமிழிலக்கணச் சூத்திரம் நுதலிய பொருளாக இங்குக்கொள்ள நியாயமும் அவசியமுமில்லை.

(5) இனிப் பழைய உரைகாரர் கொள்கைப்படி இச்சூத்திரம் இவ்வெட்டு மணத்தைக் குறிப்பதாகக் கொண்டாலும், வரிசைமுறையில் இவ்வெட்டில் முதலிலிருந்து முறையே மூன்றாம் நான்குமாக ஏழுபோக இறுதிநின்ற பைசாசம் எண்ணப்படாமலும், நடுவின்ற கந்தருவம் பெருந்திணை கொள்ளும் பின்னான்களுடே சேர்த்தெண்ணப் பட்டும் வரும். இது அசங்கதமாகமுடியும். இதை விலக்க வேண்டி, முன்னைய மூன்று என்பதை முதலிலிருந்து எண்ணுவதைவிட்டுக் கந்தருவத்தை விலக்கெல்லையாக வைத்து, அதன் பின்னுள்ள மூன்றை முதலில் மூன்றெனவும், கந்தருவத்துக்கு முன்னிற்கும் நான்கையும் பின்னர் நான்கெனவும் உரைகாரர் இயல்முறை பிறழ்க்குறநேர்ந்தது.

(6) இப்பொருந்தா உரை கோடலால் வரும் அசங்கதம் இன்னும் ஒன்றுளது. குற்ற மற்ற பிரமமுதலிய முதல் நான்கையும் குற்றம் கிடைத்த பொருந்தாத இழந்தகாமமான பெருந்திணையாகவும், வெறுக்கவேண்டிய பாவக்கூட்டமான பைசாசம் ஆகும் இராக்கதங்களைப் புரைதீர்காமமான தூயவுணர்ச்சியை நிலைக்களனாகக்கொண்டு நிற்கும் கைக்கிளை யாகவும் கூறுதல் விபரீதமன்றோ? தொல் காப்பியர் செந்திற் கைக்கிளை-உயர்ந்தோர் மேற்கொள்ளுந் தவற்றை நல்ல காமமெனவும், 'நோந்திற் பெருந்திணை' இழந்தோர்பாற்படும் தவறான பொருந்தாக் காமமெனவும், அதத்திணை 53-54 ஆவது சூத்திரங்களால் தெற்றென விளக்கிப் போந்திருக்கவும், அவர் கூற்றுக்கு மாறாகப் பாவக்கைக்கிளையும் புனிதப்பெருந்திணையும் உள்ளனபோலக் கொள்ளுதல் இழுக்காகும். சிந்திப்பார்க்கு வடநூல் கூறும் எட்டுக்கூட்டமல்லாத ஆசிரியர் தாமே தம் தமிழிலக்கண நூலில் தமிழ்மரபாக விளக்கியன வேறுதல் வேண்டுமென விளங்கும். அவையாவையெனத்தெளிதற்கு அடுத்த சூத்திரத்தையும் சிறிது கவனித்தல்வேண்டும்.

இனி, அடுத்த 15ஆவது சூத்திரம்: “முதலொடு புணர்ந்த யாழோர் மேன, தவலருஞ்சிறப்பின் ஐந்திலம்பெறுமே.” என்பது. இதற்கு இளம்பூரணர், “கருப் பொருளொடு புணர்ந்த கந்தருவநெறி களவும் உடன்போக்கும் இற்கிழத்தி காமக்கிழத்தி காதற்பாத்தையும் எனச்சொல்லப்பட்ட ஐவகைக்கூட்டம்” எனப்பொருள் கூறினார்.

(1) உடன்போக்கு களவினொரு பகுதியேயாகலானும், இருகிழத்தியர் பாதையர் கூட்டமெல்லாம் கற்புக்கைகோளிலடங்கிய சிலவுப்பிரிவுகளே யாகலானும், இவற்றைக் களவுக்கூட்டம் கற்புக்கூட்டம் என்பவற்றோடு ஒத்த தனிவேறு கூட்டங்கள்போலப் பிரித்தெண்ணுதல் பொருந்தாது. இவ்வாறு உட்பிரிவுகளை யெல்லாம்

எண்ணில், இயற்கை, இடந்தலைப்பாடு, பாங்கன் பாங்கிகளாலாவன, பகற்குறி, இரவுக்குறியாதிக்கூட்டங்களை யெல்லாம் கூட்டியெண்ணல் வேண்டும். இவை பலவற்றை விலக்கிக் கூட்டமின்றிக் கூட்டநிமித்தமேயான உடன்போக்கைக் களவொடொப்பத் தனிவேறு பிரித்தெண்ணக் காரணமில்லை.

(2) களவெனவே, அதனுட் பிரிவுகளெல்லாம் அடங்கும். உட்பிரிவுகள் அனைத்தையும் பிரித்து விலக்கியபின் களவென வொருதனி வேறு கூட்டங் கருது தற்குமில்லை.

(3) கற்பியல்பின் வேறாக விதந்து பிரித்து அக்கைகோளி நிலக்கணமெல்லாம் ஆண்டு விளக்கும் ஆசிரியர், இக்களவியல் முற்பகுதியில் களவுக்கேயுரிய நால்வகைப் புணர்வும், அவற்றின் நிமித்தங்களும், அவைகளுகத் தலைவன் கூற்று நிகழுமாறுங் கூறுமில்விடத்துக் கற்புக்கூட்டப் பாருபாடு சிலவற்றை யிழுத்துப் பேசலானாரென, அக்குறிப்பை ஆசிரியர் சுட்டாதபோது, நாமல்வாறு உரையிற் கொள்ள நியாயமில்லை.

(4) “முதலொடு புணர்ந்த” என ஆசிரியர் தெளிசொற் கூறவும், அது குறிக்கும் நிலம் பொழுதெனும் இருமுதற் பொருள்களை விலக்கி, இங்குக் “கருப் பொருளொடு புணர்ந்த” என மாறுகூறுவதும் ஆசிரியர் கருத்திற்கிணங்குவதன்று.

(5) இதில் “யாழோர்மேன.....ஐந்திலம் பெறும்” எனுந் தெளிசொற்களால் ஆசிரியர் களவுக்கைகோருக்குரிய அன்பினைத்திணையே கருதினரென்பது தெளிவு. இவ்வாறு கொண்டால் தாம் கூறக்கருதிய பொருளொடு பொருந்தாதெனக்கண்டு, ஈண்டு ஐந்துங் கூட்டமேயாக அமைக்கவிரும்பி உரையாசிரியர் இடர்ப்படுகின்றார். ஐந்திணையாம் உரிப்பொருள்களில், குறிஞ்சித்திணையே கூட்டமாக, பிறதிணைகள் களவிற்பத்தைச் சிறப்பிக்கும் கூட்டத்துணைத்திணைகளே யாதலால், அவையினைத்தும் ஐந்துகூட்டமெனக் கூற்ற்கில்லை. ஆனால், இதிலும் இதன் முன்னவையான இருகுத்திரங்களிலு மெண்ணப்பட்ட ஐந்தும் ஏழுமாகிய பன்னிரண்டும் பாங்கரைவேண்டும் கூட்டமே யாகுமெனத் தாமதுணிந்தபடியால், ஆசிரியர் இச்சுத்திரங்களில் முன்விளக்கிய ஐந்திணையிலக்கணத்தையும் தெளிவான சொற்களையும் கருதாமல், தாம் கூட்டங்களாக ஐந்தினைக்கூற நினைந்து களவுகற்பு இவற்றினுட்பிரிவுகளில் தமக்குத் தோன்றிய சிலவுமாகச் சேர்த்து, ஐந்து கூட்டம் இச்சுத்திரம் முதலியதாகவும், முன்குத்திரம் ஆரியமணமெட்டில் இடைக்கந்தருவ மொழிய மற்றைய ஏழுகூட்டங்களையே முதலியதாகவும் கூறிவைத்தார். இதில் உடன்போக்கு கூட்டச்சார்பன்றிக் கூட்டமாகாமையும், பாங்கியன்றிப் பாங்களிமித்தமாகாமையும், பைசாச முதலியவற்றிற்கு இருவகைப் பாங்கரும் வேண்டப்படாமையும், எண்வகைக் கூட்டம் தமிழ் மரபில்லாமையும், அவற்றையும் பின் வேறு பகுதியாக இலக்கணங் கூறுங் கற்புப்பகுதிகளையும் இங்குக் களவுப்புணர்ச்சி அதற்குரிய பாங்கர் நிமித்தம் தலைவன் கூற்றுக்களுக்கு இலக்கணங் கூறுமிடத்து வலிந்து இழுத்து இணைப்பதின் அமைவின்மையும், “முதலொடு” என்பதற்குக் கருப்பொரு

ளொடு என்பதன் பொருந்தாமையும், இன்ன பலபிற இயையின்மைகளும் ஈண்டு உரையாசிரியர் கருதினரில்லை.

இனி, இவ்வாறே இச்சூத்திரத்துக்கு நச்சினர்க்கினியரும் பொருந்தாப்பொருள் கூறிப்போந்தார். இனி “யாமோர் மேன.....ஐநிலம் பெறுமே” யெனுமிச் சூத்திரம் சுட்டும் ஐநிலமாவன யாவை? பாலையுட்பட “வையம் பாத்திய” ஐநிலமென உரைகாரரிருவரும் கொள்ளற்கில்லை. அவர்கள் முன்னைய சூத்திரங்களோடு இத்நைச் சேர்த்து இவற்றில் வரும் மூன்றும் நாலும் ஐந்துமான பன்னிரண்டும் கூட்டமேயெனக் கொண்டதனால், அப்பன்னிரு கூட்டத்திற்கும் பன்னிருநிலங்கூறல் கூடாமையானும், தாம் கொண்ட கூட்டம் பன்னிரண்டுக்கும் ஒப்ப அமைவதானதோர் பொருளே ஈண்டு நிலத்திற்குக் கொள்ளவேண்டுதலானும், நடுவினைந்திணையான களவுக்கே வையம்பாத்திய ஐவகை நிலத்தையும் ஆக்கிவிடில் பிறகூட்டம் ஏழும்பெறுநிலமில்லையாகலானும், பாலேக்கு நிலமின்றிப் பிறநான்கு திணைகளுக்கே யுரியவாக வையத்தை நாளிலமெனவே ஆசிரியர் கூறினராகவே அதற்கு மாறாக அவ்வாசிரியரின் இச்சூத்திரத்துக்கு ஐந்து நிலப்பகுதி கூறக் கூடாமையானும், ஈருரைகாரரும் ஈண்டு ஐநிலம் என்பதற்கு நிலப்பகுதி யென்னாது இதில் ஐந்தும் முன்னைய சூத்திரத்திலேழுமான பன்னிரண்டுக்கும் அமையவேண்டி வேறுபொருள் காண முயல்வாரானார்.

இளம்பூரணர் “ஐநிலம் பெறும்” என்பதற்குக் கந்தருவம் ஐந்துவகைப்படும் என்று கூறி, அவை களவு உடன்போக்கு கிழத்தியரிருவர் பரத்தையர் கூட்டம் ஆக்கூட்டம் ஐந்துமாமென்பர். நச்சினர்க்கினியர், ஐநிலம் இவையென விளங்கக்கூறாமல் வாளா “ஐவகை நிலனும் பெறுதலின்” எனக்கூறிவிட்டு “ஈண்டு யாமோர் மேன” என்பதை அன்பினைந்திணைக்களவான கந்தருவமல்லாததும், ஆனால் அக்களவையே முதலாகக் கொண்டுவருவதுமான பிறிதொரு இரண்டாங் கந்தருவமாகும் என்று ஒரு புத்துரை புனைந்தார். இஃது இவர் அறிவு வளத்தின் அருமை காட்டுவதாகுமன்றி ஆசிரியர் கருத்தை விளக்குவதாயில்லை. “அன்பொடு புணர்ந்த ஐந்திணை மருங்கிற் காமக்கூட்ட மாந்” தமிழ்க்களவு “மறையோர்தேளத்து மன்றலெட்டினுள் துறையமை நல்லியாழ்த்துணைமை யோரியல்” பாகும் ஆரியக்கந்தருவத்தன்மையாம் என்று களவியல் முதற்கூத்திரத்தில் தெற்றெனத் தெளித்த தொல்காப்பியர், பிறிதியாண்டும் இதனின்வேறாயதோர் கந்தருவமும் தமிழ்நூலார்க்குடன்பாடாவதுளதெனக் குறித்தாரிலர். ஆகவே ஈண்டு நச்சினர்க்கினியர் கூறும் புத்துரை ஆசிரியர் கருத்தன்றென்பது விளக்கம். அன்றியும், நச்சினர்க்கினியரின் இவ்விரண்டாங் கந்தருவம் தமிழிலக்கணம் அறியும் களவு கற்பு எனும் இருகைகளினும் அடங்காதாகவே, தமிழிலக்கண நூலில் அதற்கிடனுமில்லை.

இனி, நச்சினர்க்கினியர், களவினை முதற்கந்தருவமென வேறு பிரித்து, அது நூல்களிற் புலவர் புனைந்துரைத்த கற்பனையளவே யமைவதெனவும், உலகியலில் நடைபெறுவது தாங்கூறும் இரண்டாங்கந்தருவமே யாகுமெனவும், களவியல்

13, 14, 15-ஆம் சூத்திரங்களுக்குத் தாம்கண்ட வுரையில் வலியுறுத்தித் தமது இக் கருத்தையே பின் சிந்தாமணி நாமகளிலம்பகம் 158 ஆவது செய்யுளுரையிலும் அது வதிக்கின்றார். ஆசிரியரோ தம் தமிழிலக்கணநூலில் தாம் கூறும் அகப்பொருளனைத் தாம் நாடகவழக்கும் உலகியல் வழங்கும் புலவரின் புலநெறி வழங்குமாவனவற்றுள் எதனையும் விலக்காது எல்லாத் தமிழ் மரபுகளையும் வடித்துத் திரட்டிக் கூறிப்போவதாக விதந்து விளக்கி வைத்தார். (அகம். சூத்திரம்-53). ஆகையால் ஆசிரியரின் தெளித்த கூற்றுக் கொவ்வாத நச்சினர்க்கினியருரை ஆசிரியரின் சூத்திரக் கருத் தாகாமை தெளியப்படும். எனையதாயினும் இச்சூத்திரம் சுட்டும் ஐந்நிலம் குறிஞ்சி முதலிய நிலப்பகுதிகளைக் குறியாதென்பது ஒருதலை.

இனி, ஈண்டு ஐந்நிலம் களவிற்பாற்படும் ஐந்திணையு மாகாவென ஈருரை காரருந் துணிந்தது சரியே. முதலில் பாங்கர் நிமித்தம் பன்னிரண்டெனத் தொகுத்துப்பின் அவையாவன முன்னைய மூன்று பின்னர் நான்கு, யாமோர்மேன, ஐந்து எனவகுத்து ஆசிரியர் முறையே யீங்கு இச்சூத்திரங்களிற் சுட்டிப்போவதனால் அவர் கூறும் இப்பன்னிரண்டும் ஒரேதன்மையனவாதல் வேண்டும் என்பது தெளியக் கிடக்கின்றது. ஆகவே, அகத்திணை யேழையாதலால், அவற்றுள் ஐந்திணை யிங்குப் பன்னிரண்டு நிமித்தங்களில் ஐந்தெனக்கூறின், மற்றையநிமித்தம் எழனுக்கும் ஒப்பப்பொருளமையாது. இங்கு ஆசிரியர் கூறும் பன்னிரண்டனுக்கும் ஒத்து அமையும் பொருள் காண்பதே முறையாகும். அதனை யினி யாராய்வாம்.

தாம் இங்கு இச்சூத்திரங்களால் வகுத்துக் கூறுவன பாங்கர் நிமித்தம் பன்னிரண்டென்பதை ஆசிரியர் இதற்குமுன் தொகுத்துக்கூறிய களவியல் 13 ஆவது சூத்திரம் யாப்புறுத்துளது. அப்பன்னிரண்டும் களவில் தலைவன் கூற்று நிகழ்த்துகே துவாகும் பலவற்றுள் பாங்கன்பாங்கிகளிற்பாற் படுவனவையாகும். அப்பாங்கர் நிமித்தம் பன்னிரண்டும், முன்மெய்தொட்டுப் பயிறல் முதலிய பலநிமித்தங்களும் தொகுத்துக்கூறும் 11 ஆம் சூத்திரத்தில் விளக்கப்பட்டுள்ளன. இதனை, 13 ஆம் சூத்திரக்கருத்தைமேலே நாம் ஆராய்ந்தபோது கண்டு தெளிந்தோம். அப்பன்னிரண்டும் அன்பினைந்திணைக் களவுக்காமேனும், அவற்றுள் முதல் மூன்று கைக்கிளைக்கும், பின் இறுதிநான்கு பெருந்திணைக்கும் வரற்பால. நடுவணைந்து நிமித்தங்களும் இவ்விரு திணைக்கும் வாயாது, நடுவணைந்திணைக் காமக்கூட்டத்துக்கு மட்டுமே பொருந்துவன வாம். இதனையே ஆசிரியர் இங்கு இச்சூத்திரங்களால் விளங்கவைத்தார்.

இதனால் களவியல் பதினைந்தாவது சூத்திரத்தில் ஐந்நிலமேன்பது, முன் பதினோராவது சூத்திரத்தில் தலைவன் கூற்று நிகழ்ப களம்பல கூறியவற்றுள் முதலெட்டு நீக்கிப் பின் கூறிய பாங்கர் நிமித்தமான பன்னிரண்டனுள் முதல் மூன்றும் இறுதிநான்கும் நீக்கி, இடை நின்ற ஐந்துகளனுமே யாகுமென்பது தெளிவாகும். எனவே, இதற்கு முன்னைய பதினான்காம் சூத்திரம் கூறும் ஏழும், ஆசிரியர் முன் பதினோன்றும் சூத்திரத்துள் விளக்கிய பாங்கர் நிமித்தம் பன்னி

ரண்டில் முதல் மூன்றும் இறுதி நான்கும் ஆக ஏழு களன்களாகும். இவ்வாறு இவையமைவதனை யினியிங்குச் சிறிது ஆராய்வாம்.

மேலே களவியற் பதின்மூன்றஞ் சூத்திரப்பொருளை ஆராயுங்கால், அதிற் கூறப்படும் பாங்கர் நிமித்தம் பன்னிரண்டும், அதற்கு முன்னைய “மெய்தொட்டுப் பயிறல்” என்னும் பதினென்றும் சூத்திரத்துக் கூறப்படும் “பெற்றவழி மகிழ்ச்சி” முதல் “மடன்மகூறு மிடனுமாருண்டே” என்பது வரை சொல்லப்படும் பன்னிரண்டையாமெனக் கண்டுவைத்தோம். தலைவன் கூற்று நிகழ்த்தகாம் நிமித்தம் இப் பன்னிரண்டனுள், முதல் நான்கு பாங்கன் கூட்டம், இறுதியெட்டும் பாங்கியற் கூட்டமாவனவாம்.

ஆப்பன்னிரண்டு நிமித்தம் வருமாறு :—

1. பெற்றவழி மகிழ்ச்சி
2. பிரிந்தவழிக் கலங்கல்
3. நிற்பவை நினைஇ நிகழ்பவை யுரைத்தல்
4. குற்றங்காட்டிய வாயில்பெட்டி
5. பெட்டவாயில்பெற்று இரவு வலியுறுப்பு.
6. ஊரும் பேருங் கெடுதியும் பிறவும்
நீரிற் குறிப்பினிரம்பக் கூறித்
தோழியைக் குறையுறும் பகுதி
7. தோழி, குறையவட்சார்த்தி மெய்யுறக்கூறல்
8. தண்டா திரப்பு
9. மற்றையவழி
10. சொல்லவட் சார்த்தலிற்புல்லியவகை
11. அறிந்தோளயர்ப்பின் அவ்வழி மருங்கிற் கேடும் பீடுங்கூறல்
12. தோழி, நீக்கலினாகிய நிலைமை நோக்கி மடன்மகூறல்.

இப்பன்னிரண்டே களவுக்கூட்டத்தில் தலைவன் கூற்றுக்கிடனாகும் பாங்கர் நிமித்தங்களாம். இவை தம்முள் முன்னின்ற

1. பெற்றவழி மகிழ்தல்
2. பிரிந்தவழிக் கலங்கல்
3. நிற்பவை நினைஇ நிகழ்பவை யுரைத்தல்.

என்பவை மூன்றும், அன்பொடு புணர்ந்த ஐந்தினை மருங்கில் காமக்கூட்ட மாம் களவுநிமித்தமாவதுடன், அகப்புறமாகிய தூயசெந்திறக் கைக்கிளைத்தினைக்கு முரியனவாகத் தங்க குறி அல்லது நிமித்தங்களாயும் அமைவனவாம். இப்பன்னி

ரண்டனுள் பின்னிறுதி நின்ற இரந்து பின்னிற்றலை மாறுமிடத்துத் தலைவன் பால் நிகழும் வேறுணர்ச்சியைச் சட்டும் “மற்றையவழி” முதல் “மடன்முகூறல்” இறுதியான நான்கும் தூயகாமக் கூட்டத்திற்கே யன்றிப் பொருந்தா இழந்த காமமான நோந்திறப் பெருந்திணைக்கும் அடையாளம் அல்லது நிமித்தமாகவும் அமைவுறுவனவாம். இவ்வாறு முண் 3, பின் 4, ஆக இவை 7 ம் போக. நடுவணின்ற 4 ஆவதான “குற்றங்காட்டிய வாயில் பெப்பு” முதல் 8 ஆவதான “தண்டாநிறப்பு” ஈராகக்கூறப்பெற்ற ஐந்தும் கைக்கிளை பெருந்திணைகளுக்கு எவ்வாற்றினும் யாண்டும் பொருந்தாதனவாய் அன்பொடு புணர்ந்த நடுவணைந்திணைக் காமக்கூட்டமாங்கத்தருவத்திற்கே யுரிய நிமித்தங்களாகும். இதுவே தமிழ் மரபு. இவ்வுண்மையையே ஆசிரியர் இங்குத் தமிழ்க் களவிலக்கணங் கூறும் களவியலில் 11 முதல் 15 ஆவது வரையுள்ள சூத்திரங்களால் தெளிசொற் பெய்து விளக்கிப்போந்தார். இவ்வுண்மையை மறந்து நெகிழவிட்டு, வடநூலிற் காணப்படும் தமிழ் மரபாகாத கூட்டம் எட்டினை இவை குறிப்பதாகக் கொண்டதனால், உரைகாரர் இச்சூத்திரங்களுக்குச்செம்பொருள் கூறமாட்டாது மயங்கக் கூறலாயினர்.

Jagannātha Paṇḍita

By

V. A. RAMASWAMI SASTRI,
(Annamalai University)

(Continued from Page 158, Vol. IV, No. 1.)

(3) AS A LITERARY CRITIC (Continued)

ABHIDHĀ THE PRIMARY SIGNIFICATIVE POTENCY

After the elucidation of the *Dhvanis*, Jagannātha takes up for discussion the two *Śabdavṛttis*—*abhidhā* and *lakṣaṇā*—on which *dhvani* (*vyañjanāvṛtti*) is based. He defines *abhidhā* as the *particular relation called śakti that subsists between word and its sense*. Some of the *Mimāṃsakas* and *Vaiyākaraṇas* consider it as a separate category. The *Naiyāyikas* however assert that it is the will of God that such and such a word should convey such and such an idea¹. Others favour the former view on the ground that there is no *vinigamaka*—special reason—to choose between the two alternatives—the will of God and the knowledge of God.

THE THREE-FOLD DIVISION OF ABHIDHĀ

The *abhidhā* is divided into three—*kevalasamudāyaśakti* (potency based on the word as a whole), *kevalāvayavaśakti* (potency based on the derivation) and *samudāyāvayavaśaktisaṅkara* (a combination of the two). The first is illustrated in words like *ḍiṭṭha* having no derivative sense except the person meant by the term as a whole. The second is illustrated in words like *pācaka* (a cook), where its derivative sense is fully taken into account, and not its conventional meaning. The third is illustrated in the word *paṅkaja* (a lotus flower) where there is a combination of both—the derivative sense and the conventional mean-

1. 'अस्मात्पदादयमर्थो बोद्धव्य इतीश्वरसङ्केतः शक्तिः'

Though the Will of God is one, yet it possesses as objects (*viśayas*) words as related to only their respective ideas to be conveyed by them, so that there is no room for the objection that the word 'go' may convey the idea 'horse' and *vice versa*.

ing. These three are popularly known by the terms *rūḍhi*, *yoga* and *yogarūḍhi*.

In the words like *āsvagandhā*, *āsvakarna*, *maṇḍapa*, *niśānta*, *kuvalaya*, Jagannātha says, different opinions have prevailed. Some say that the word *āsvagandhā* by its *rūḍhiśakti* means a *particular plant*, but it means a *stable* by its *yogaśakti*; so the word is sometimes *yaugika* and sometimes, *rūḍha*, and is not *yogarūḍha*, since in no case does it convey the combined idea, like the word *pañkaja*. Others opine that words like *āsvagandhā* are *neither yaugika nor rūḍha* but are *yogarūḍha* which, however, admits of two divisions—*yogarūḍha* and *yaugikarūḍha*. The word *pañkaja* is the example of the *yogarūḍha* and words like *āsvagandhā* are illustrations for the *yaugikarūḍha*, where the two senses—*yoga* and *rūḍhi*—are not combined in one instance. The Naiyāyikas admit the *yaugikarūḍha* as a *fourth* variety of śaktapada. Others, probably the metaphysicians among the grammarians, hold that there is only one variety of the śaktapada, viz., *rūḍha*, and the division of a pada into prakṛti and pratyaya and that of samāsa into padas is only conventional and as such, untrue.

YOGARŪḌHA WORDS SOMETIMES PURE YAUGIKAS BY LAKṢANĀ

It is true that in instances like

“गीष्पतिरप्पांगिरसो गदितुं ते गुणगणान्सगर्वो न ।

इन्द्रः सहस्रनयनोऽप्यद्भुतरूपं परिच्छेत्तुम् ॥”

the words ‘गीष्पतिः’ and ‘सहस्रनयनः’ convey as *yogarūḍha śabdas* the double meaning, so that the words आंगिरसः and इन्द्रः are superfluous; but it is accepted that the *yogarūḍha* words in such instances do not convey the *double sense* by *abhidhā* but convey *only the derivative sense* by *lakṣanā*, and the other word conveys the *rūḍhi* sense, with the result that in such instances there is left much scope for the suggestion of some novel and beautiful idea as would be conducive to the pleasure of the readers. If one uses the word—*pañkajākṣī* (lotus-eyed one)—for example, to address a person whose eyes do not at all resemble the lotus-petals, it conveys only the *rūḍhi* sense, viz., the person addressed to, and the derivative idea is not taken into account since the addresser has no such intention. But if another word is used to convey the derivative sense as in the example—इन्द्रः सहस्रनयनः—the *yogarūḍha* word conveys the derivative sense and the other, the *rūḍhi* sense, which help the suggestion of many ideas as the context would be. So there is no question of superfluity of one word in the instances like ‘इन्द्रः सहस्रनयनः’

THE FOUR-FOLD DIVISION OF THE ABHIDHEYĀRTHA

The sense conveyed by a word through its *abhidhāśakti* is of four kinds—*jāti* (generality), *guṇa* (quality), *kriyā* (action) and *yādṛcchika* (accidental).

(1) The generality *gotva* (cowness) which is manifested by the physical structure of the cow is the idea conveyed by the *gośabda* through *abhidhā*. Here Jagannātha follows the *jātiśaktivāda* of the Mimāṃsakas and not the *viśiṣṭaśaktivāda* of the Naiyāyikas. How one derives the knowledge of the individual from the cognition of the word 'gauḥ' is explained in two ways: (a) The *gośabda* in the sentence—*gāmānaya*—conveys the individual through *lakṣaṇā*, the secondary significative potency, which is applied on the *incompatibility* of the *abhidheyārtha*—*gotvajāti*—as related to the *ānayanakriyā*. (b) It is accepted that the cognition of the *abhidhā* of a word which has the generality only as its object, generates the recollection and the verbal cognition possessing the *generality* and its *substratum*—*individual*—as their objects. So runs the Vākyapadiya—'The cow is not a cow by its form, nor is it a non-cow; but it is (called) cow because of its relation to the *gotva* (cowness).' This explains well that the usage *gauḥ* is based not on the individual which possesses certain peculiar physical features, but on the generality—*gotva*; so also is the usage *agauḥ* (non-cow).

(2) The quality like white colour is the primary sense conveyed by the word *śukla*. This *śukla guṇa* in all white objects is one and the same and this oneness of the white colour helps one to extend one's *śaktigraha* to other white substances which one has not experienced during the time of one's first *śaktigraha*.

(3) The action like motion (from one place to another) is the primary sense known from the word *cala*. Here also it is accepted that on the ground of *lāghava*, the action viz. *calana* is one and the same belonging to different moving objects.

(4) A particular property, the *pravṛttinimitta* (the sole condition of the use of a word), is the primary sense of the word *dittha*—a *yādṛcchika śabda*. About the nature of this property different views were spoken of: (1) One view is that it is nothing but the *sphoṭa* manifested by the last varṇa (of the word) which is found in the individual (meant by the word), through a circumlocutory relation. (2) Another is that it is the group of varṇas possessing a sequence (which is also to be explained as existing in the individual, through a circumlocutory relation). (3) Yet other is that it is the individual itself (beside whom

nothing is known as the meaning of the word—*ḍittha*). In the first two views, the cognition arising from that of the *yadṛcchā śabda* is a *determinate cognition* (*viśiṣṭajñāna*) where the *viśiṣṭa* is cognised on the basis of that of the *viśeṣaṇa* (adjunct). In the last one, it is an *indeterminate cognition* (*nirvikalpaka jñāna*) of the very person—*ḍittha*. Thus the fourfold use of *śabdā*s in different senses (through *abhidhā*) is explained, which is generally followed by all schools of thought. Jagannātha explains another view that all *śabdā*s can be grouped under one head—*jāti*, which is conveyed by all kinds of words alike. The words conveying quality and action denote only those generalities resting on them, and the *yadṛcchā śabdā*s also do convey some generalities resting on those persons (meant by them) who are considered to be different by difference of time.

LAKṢAṆĀ—ITS DEFINITION AND CONDITIONS

Lakṣaṇā is defined as *the relation to the primary sense of a word*. It is generally adopted on the basis of the *unintelligibility* (*anupapatti*) of the primary sense of a word in the context. For example, in the instance—*Gaṅgāyām ghoṣaḥ*, the word *Gaṅgā* primarily means the *current*, which is incompatible in the context in that the *ghoṣa* (hamlet) cannot exist on the current; so the primary idea is set aside and the secondary sense—*bank* (being related to the *current* by its *proximity*—*sāmīpya*) is conveyed by the word *Gaṅgā*.

It cannot be, however, accepted that the incompatibility of the primary sense in the context is the sole condition of lakṣaṇā. In the example, 'Kākebhyo dadhi rakṣyatām' (curd is to be protected from the crows), there is no *vācyārthānupapatti*; but according to the intention of the speaker, Lakṣaṇā is to be adopted in the word 'kāka' in the sense of 'all those which cause harm to the curd' (*dadhyupaghātakas*). So the *incompatibility of the intention or the intended idea of the speaker* (*tātparyānupapatti*) is to be considered as the primary condition for the adoption of lakṣaṇā. It is also held that the secondary sense of a word becomes the object of the intended *śābdabodha* with the delimiting adjunct of the *mukhyārthatā* (the state of being the primary sense), so much so that the delimiting adjunct of the *mukhyārthatā* (*mukhyārthatāvachedaka*) does not become the delimiting adjunct of the *tātparyaviśayānvayitā* (the state being the related (object) of the intention or the intended sense). To illustrate in the famous example, the verbal cognition 'the hamlet on the bank' possesses *gaṅgātva* (Gangesness) as the delimiting adjunct of the *lakṣyārthatā* (the state of being the secondary sense). Not only that, the *relation* (*anvaya*) which becomes the object of the intended *śābdabodha* should not be

reciprocated (nirūpakatvābhāvaḥ) by the correlativeness (*pratiyogitā*) of the primary sense with the delimiting adjunct of the mukhyārthatā. In brief, in the example 'Gaṅgāyām ghoṣaḥ', the *current* is not to be known as *current* but the *bank* is to be cognised as *current* (i.e.) with currentness (*gaṅgātva*) with the result that the hamlet resting on the bank of the Ganges is known as associated with the properties of the current of the Ganges, viz., coolness, sanctity, etc.

The relation between the primary sense and secondary sense is varied; in the instance—'the hamlet on the Ganges'—it is *proximity* (of the current of the Ganges to its bank); in the 'face-moon' (moon-like face), it is *similarity*; in the word 'darśa' it is *virodha*—antithesis (i.e.) the word *darśa* by the derivation—दृश्यते चन्द्रमा : अस्मिन्—has to mean through abhidhā the full-moon day, but it now means the new-moon day, which is to be explained only through *viparītalakṣaṇā*; in the example 'Life is ghee—आयुर्वृतम्' the relation is *causality*. In this way many other relations also can be explained in the secondary usage.²

DIVISION OF LAKṢAṆĀ

The lakṣaṇā is divided into two—*nirūḍhā* and *Prayojanavatī*. (1) *Nirūḍhā*. The *nirūḍhā* is generally based on the time-honoured usage without any reference to its derivative sense. The words—*anukūla*, *pratikūla*, *anuloma*, *pratiloma*, *lāvaṇya*, etc., are the best examples for this variety. Jagannātha explains that since there is the unintelligibility of the primary sense of the word अनुकूल (like कूलानुगत—that which is suitable to the bank) in the instance—अयं अनुकूलः—it conveys through the relation of similarity the idea of 'अनुगुणः—suitable or favourable.' So the words like *nīla* which convey through abhidhā *nīlatva*—the generality of the *nīlaguṇa*, indicate (through lakṣaṇā) the *nīlaguṇa* (the black quality) or the *nīladravya* (the black substance, as the case might be). Some hold that the *nirūḍhā* has got two varieties—*śuddhā* (pure) and *gauṇī* (qualitative).

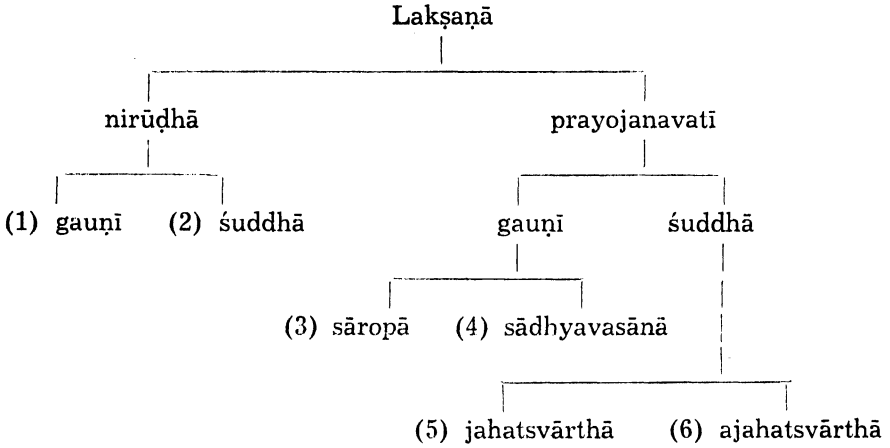
(2) *Prayojanavatī*. The *prayojanavatī* is of two kinds—*gauṇī* (qualitative) and *śuddhā* (pure). The *gauṇī* is of two kinds—*sāropā*

2. Compare Ācārya Bhartṛmitra's Kārikā—

‘अभिधेयेन सारूप्यास्सामीप्यात्समवायतः ।

वैपरीत्याक्रियायोगाल्लक्षणा पञ्चधा मता ॥

(super-imponent) and *sādhyaivasānā* (intro-susceptive) both having 'super-imposition' as its basis. The *śuddhā* is divided into—(1) *jahatsvārthā*³ and (2) *ajahatsvārthā*.⁴ Thus six main varieties of *lakṣaṇā* can be described (as the following table shows):—



The difference between *sāropa lakṣaṇā* and *sādhyaivasāna lakṣaṇā* is explained that in the former the two objects—compared and comparable—are separately mentioned and their identity is spoken of, while in the latter their identity is described even without their separate mention.

GAUNĪ: (1) SĀROPĀ (SUPER-IMPONENT)

The first is illustrated by 'मुखं चन्द्रः—the face (is) moon.' Here the word *candra* conveys through *lakṣaṇā* the sense *candra-sadrśa*—'similar to moon', which is related to 'face' by the tie of *abheda* (identity), so much so that the verbal cognition arising from the statement 'face (is) moon' has got 'face' as its *viśeṣya* (chief object of cognition), 'similar to moon' as its *prakāra* (adjunct) and 'identity' as the relation of the two ideas—*viśeṣya* and *prakāra*. The *śābdabodha* (the final verbal cognition) runs thus— 'मुखं चन्द्रसदृशमिदम् —the face is identical

3. *Jahatsvārthā* is illustrated by the example— गङ्गायां घोषः, where the primary sense (svārtha) of the word गङ्गा is abandoned and the new idea 'bank' is conveyed by the word.

4. *Ajahatsvārthā* is generally illustrated by काकेभ्यो दधि रक्ष्यताम्, यष्टी प्रवेशयं where the primary sense is not abandoned but is merged into the body of the secondary sense.

with the (object) similar to the moon'. This explanation is based on a generally accepted maxim in śābdabodha—**नामार्थयोरभेदः संसर्गः**—*abheda* (identity) is the relation between two senses conveyed by substantives (expressing one and the same sense through different media).

Now a question is raised in the example '**मुखं चन्द्रः**.' If the word '*mukha*' by *sāropa lakṣaṇā* conveys the idea '*mukhasadrśa*,' where is the difference between the two figures of speech—*Upamā* (simile) and *Rūpaka* (metaphor)? It is accepted generally that '**मुखं चन्द्रः**' is an illustration for metaphor, while '**चन्द्रसदृशं मुखं**;' is that for simile. It cannot be argued that the difference between these two lies in the fact that in the former the relation viz. *pratiyogitva* between *candra* and *sadrśa* (both parts of the secondary sense of the word '*candra*'—*candra-pratiyogika-sadrśyavat*) is known as the *śabdārtha*, while in the latter, the relation viz. *abheda* between *candrasadrśa* and *mukha* is known through *saṃsargamaryādā*—the juxtaposition of the two words. For, this difference cannot be taken as the criterion to distinguish one figure of speech from another. Otherwise we will have to accept the difference between '**चन्द्रसदृशं मुखम्**, and '**चन्द्र इव मुखम्**' both accepted examples of simile.⁵

For this, the *Prācīnas* suggest different solutions :—

Prācīna view (i): The difference between *Rūpaka* and *Upamā* lies in that in the *Rūpaka* there arises a cognition of *tādrūpya* on the basis of *lakṣaṇā*, while in the *Upamā* there is no such *tādrūpyapratyaya*. This *tādrūpya* cognition is nothing but the knowledge of the face (*viśaya*), in the example, '**मुखं चन्द्रः**' as possessing *candratva* (i.e.) the knowledge of the face (the compared object) with *candratva* as the delimiting adjunct of the *viśayitā* (**विषयितावच्छेदकं**), the special property of the standard of comparison. How does such a cognition arise when there is no means for it and when we perceive the difference between face (*viśaya*) and moon (*viśayin*)? Here the *Prācīnas* explain the means of

5. In the instance **चन्द्रसदृशं मुखम्** the *abheda* (identity) is the relation between the two *nāmārthas*—**चन्द्रसदृशं** and **मुखं** but in the instance **मुखं चन्द्र इव**, either *candra* is related to *sadrśya* (the meaning of the *nipāta-iva*) by *pratiyogitva* (which is known by *saṃsargamaryādā*) and the *sadrśya* is related to *mukha* by *anuyogitva*, or the word *candraḥ* means by *lakṣaṇā candrapratyogika-sadrśyavān* as in the case of *rūpaka*, and the relation between *candra* and *sadrśa*, viz. *pratiyogitva* is known as the *śabdārtha*.

this kind of knowledge as *vyañjanā*, which can be however adopted in the word 'face' as in the instances of *śleṣālankāra* ; and this cognition through *vyañjanā* is in no way obstructed by the contradictory perception (*pratyakṣabādha*). Hence the *tādrūpya* cognition is possible in *Rūpaka*.

Again, another objection is raised : no doubt, there arises a cognition which presents the *tādrūpya* between the *candra-saḍṛśa* and *candra* in that both of them are conveyed by the word 'candra' through *lakṣaṇā* ; but how can one cognise the *candra-tādrūpya* as related to face when it is known, (as conveyed by the word 'mukha' with *mukhatva* as its *śakyatāvachcheda*) as possessing its own property, *mukhatva* ? In the famous instances of *Rūpaka*— 'वक्त्रे चन्द्रमसि स्थिते किमपरः शीतांशु हज्जुम्भते' the saḥṛdayas do, however, experience the *viṣayitādrūpya* in *viṣaya* (i.e.) the face as possessing the *tādrūpya* of the moon, a fact which however requires a satisfactory explanation.

To this the *Prācīnas* reply that there arises the cognition of the face as possessing *candra-tādrūpya* on the basis of the rule : '*tadabhinna-bhinnasya tadabhinnavatvam*—If A is equal to B and if B is equal to C, then A is equal to C.' It has been already said that there arises the *tādrūpya pratyaya* (through the extraordinary power of *vyañjanā*) of the *candra saḍṛśa* (the secondary sense of the word 'candra') with the special property of *candra* as the delimiting adjunct of *lakṣyatā*. Similarly it can be also said that on the basis of the cognition of identity between *candra saḍṛśa* and *mukha* (by the rule—*नामार्थयोरभेदः संसर्गः*), the face also is known as *candratādrūpyavān* (i.e.) known with *candratva*.

Prācīna view (ii): Others offer an easier explanation to distinguish *Upamā* from *Rūpaka*. Though in the example of *Rūpaka*—*mukham candraḥ*—the word 'candra' conveys through *lakṣaṇā* the sense *candra-saḍṛśa* (i.e.) the face with *candrasaḍṛśatva* as the delimiting adjunct of *lakṣyatā*, yet it conveys also the face (through *lakṣaṇā* itself) with *candratva* as the delimiting adjunct of *lakṣyatā*, so much so that there arises a cognition of identity between *candrasaḍṛśa* (the secondary sense of the word 'candra') and *face* (the primary sense of the word 'mukha') as two *nāmārthas*. Such a knowledge of face from the word 'candra' with *candratva* as the delimiting adjunct is possible just as from the word 'gaṅgāyām' one gets the knowledge of the 'bank' with *gaṅgātva* as its delimiting adjunct of *lakṣyatā*. On the basis of the knowledge of identity arises the knowledge of the face as possessing the special qualities of moon such as brightness, just as one derives the

knowledge of coolness and sanctity as related to the bank of the Ganges. The word 'tādrūpya' means the special properties found in viṣayin—moon. The cognition of the identity between moon and face generates another cognition which has as its object the special qualities associated with moon. So there is even the difference in cognition arising from statements involving Rūpaka and Upamā.

Prācīna view (iii): Yet others opine that in instances of Upamā, the sādrśya (similarity) is associated with bheda (difference), so that cognition of bheda and sādrśya arise, while in those of Rūpaka, it is not associated with bheda (i.e.) there is only one cognition with sādrśya as its object (like candrasadrśa).

The Navīna⁶ view is this: In the Rūpaka 'मुखं चन्द्रः' there arises the verbal cognition of the identity between the two nāmārthas—face and moon—even without lakṣaṇā in the word 'candraḥ'. It is accepted that verbal cognition arises even when there was already a valid contradictory cognition. That is why śabda is spoken of as possessing a unique power of generating a cognition presenting even a non-existing object⁷—object whose negation or absence is experienced. But in the instance 'वह्निना सिञ्चति—(one) sprinkles with fire', no verbal cognition arises because there is no yogyatājñāna—cognition of congruity (i.e.) fire is not only previously unknown as the instrument of sprinkling but is also known as incapable of it. In the instance 'मुखं चन्द्रः' though the difference between face and moon is experienced, there arises an āhāryayogyatājñāna⁸—a cognition of its capacity which arises on mere supposition though the contrary is known to be true. And it is held that from such an invalid yogyatājñāna arises a (valid) verbal cognition of the identity between face and moon.

They suggest another alternative thus:—In such instances as 'मुखं चन्द्रः' the śābdabodha is āhārya (invalid), in view of the fact that the yogyatājñāna is not at all considered as a condition of the śābdabodha and that the rule that the āhārya cognition belongs to the kind of perception only, is not accepted. In the Rūpaka 'मुखं चन्द्रः' arises

6. The Navīna view belongs to Appayya Dikshita as expounded in his Citramīmāṃsā.

7. Compare the Ślokaivārttika, I. 1. 2 'अत्यन्तासत्यपि ज्ञानमर्थे शब्दः करोत हि' ।

8. 'बाधकाले इच्छाजन्यं ज्ञानं आहार्यम् ॥

the invalid cognition of identity between face and moon—the two primary senses of the words ‘mukham’ and ‘candraḥ’, and not one primary sense and one secondary sense. They add that even the Prācīnas are said to have accepted that in such instances there arises a cognition of identity between the two vācārthas; otherwise in the Rūpaka—**राजनारायणं लक्ष्मीस्त्वामालिङ्गति निर्भरम्**—the Goddess of Wealth incessantly embraces King-Nārāyaṇa (the Nārāyaṇa-like king)—the embrace of Goddess Lakṣmī cannot be described unless the identity between the king and Nārāyaṇa (God Viṣṇu) is cognised, according to the rule—**नामार्थयोरभेदः संसर्गः**); and in the Upamā **पादाम्बुजं भवतु मे विजयाय मञ्जुमङ्गीरशिक्षितमनोहरमम्बिकायाः**—‘May the lotus-like foot of Goddess Ambikā which is beautiful by the sounds of the handsome anklet, be for your victory’—the beauty of the foot cannot be explained in reference to the lotus-flower if we split the compound ‘**पाद एवाम्बुजम्**’ (where the lotus-flower, the meaning of the word—**अम्बुजं**, becomes the chief idea of the compound). If in the Rūpaka and Upamā alike *lakṣaṇā* is adopted in the sense of *sādṛśa*, the statement of the Prācīnas that the unintelligibility of the contextual meaning is the basis for *lakṣaṇā* in Rūpaka and Upamā would be of no validity. If in the Rūpaka—**राजनारायणं**—the word ‘nārāyaṇa’ means *nārāyaṇasādṛśa* through *lakṣaṇā*, the unintelligibility of the contextual idea (the embrace of Viṣṇu by Lakṣmī) can be explained even if it means *nārāyaṇasādṛśa* as an instance of Upamā. So also in the Upamā—‘**पादाम्बुजं**’ the same can be said even if it is taken as a Rūpaka—‘**पाद एवाम्बुजम्**.’ This difficulty, the Navīnas add, is not only experienced in the *compound usages* but also in the *vyasthaprayogas*—non-compound usages—involving Upamā and Rūpaka in the instances—‘**कृपया सुधया सिञ्चा**’

Moreover, the Navīnas raise a question against the Prācīnas: If in the rūpaka the words denoting the standard of comparison convey by *lakṣaṇā tatsādṛśa*, it is to be accepted that the *lakṣyatāvachedaka* (the delimiting adjunct of *lakṣyatā*) is *sādṛśya* (similarity); then, is this similarity cognised with its particular properties or with the general properties? In the former case, in the instance ‘**सुन्दरं मुखं चन्द्रः**’ the word ‘candra’ means *candrasādṛśa* and as such conveys the *sādṛśya* with the special property—*sundaratva* (beautiffulness) and the word ‘sundara’ also conveys the same by its *abhidhāśakti*, so that there is the fallacy of repetition (**पौनरुक्त्यम्**) (i.e.) one idea is conveyed by two words. In the latter case, since the similarity is given expression to by the word, it will be an Upamā and not Rūpaka. It is

held even by the Prācīnas that in the well-known Upamās the similarity (sādrśya) is conveyed by words either through abhidhā or through lakṣaṇā. Hence the Navīnas conclude that it is to be accepted even by the Prācīnas that in Rūpaka there arises invariably a (valid or invalid) cognition of the identity between the upameya (compared) and the upamāna (the comparable), the two nāmārthas.

JAGANNATHA'S VIEW: HIS ADHERENCE TO THE PRACĪNA VIEW.

Now Jagannātha examines which of the aforesaid views is to be accepted. He adheres to the Prācīna view and points out some main defects in that of the Navīnas. The very argument (of the Navīnas) that in Rūpaka a cognition of identity between two nāmārthas arises is not acceptable, since in Rūpaka as in Upamā such an identification is possible only when the general beautiful qualities of those two objects are previously known. In the instances 'भारतं नाकमण्डलं नगरं विधुमण्डलं' the cognition of identity arises even without knowing it as an instance of Rūpaka, for the knowledge of the latter depends upon the knowledge of the general qualities which are conveyed by *ambiguous* words like सुपर्वालंकृत—ornamented by suparvans (Devas and learned Pandits). In the famous example 'मुखं चन्द्रः' the similarity between face and moon is so well-known that it does not generally require any special mention or description. So it is to be accepted that in Rūpaka there is the adoption of lakṣaṇā in the sense of sādrśa—a fact which does not any way depend on the cognition of identity. And it is said that the statements of the unreal or non-existing relation of two objects do not depend on anything like the sādrśya and its cognition, but those which contain a metaphor are based on the knowledge of the special or general qualities of the objects, the compared and the comparable, that the abhedha cognised in rūpaka is nothing but the tādrūpya cognised on the basis of vyañjanā.

The difference between Rūpaka and Upamā is explained that in Rūpaka sādrśya is cognised, not as associated with bheda (difference) between the compared and the comparable, while in Upamā it is known as associated with bheda.⁹ Again in the example 'राजनारायणं' the compound conveys (through lakṣaṇā) the idea 'राजाभिन्ननारायणसदृशः'

9. Compare the definitions of Upamā and Rūpaka—(a) 'सादृश्यमुपमा भेदे' Kāvya-prakāśa. Ullāsa X. Verse 1. 'उपमैव तिरोमूतभेदा रूपकमिष्यते'

—similar to Nārāyaṇa who is identical with the king—with *nārāyaṇatva* as its delimiting adjunct, so much so there is no unintelligibility of the contextual idea—the embrace of Kṛṣṇa by Lakṣmī. If the *viśeṣaṇasamāsa* is accepted in the instance— ‘पादम्बुजम्’ the secondary sense of the word ‘ambuja’ viz. *ambujasadrśa*, would be the chief idea of the compound; and there would be the *anupapatti*—unintelligibility of the contextual idea (*mañjiraśiñjitamano-haratva*); but if it is accepted as an *upamitasamāsa* (i.e.) the compound conveying by *lakṣaṇā* the idea—*ambujasadrśapāda* (lotus-like foot) where *sadrśya* is associated with *bheda*, then the chief sense of the compound in the sense of the last component element of the compound, (i.e.) the foot of the Goddess, which has got the natural beauty on account of the beautiful sounds of the anklets.

Patañjali's¹⁰ explanation of usages involving imposed identity under four heads—*tātsthya*, *tāddharmya*, *tatsāmīpya* and *tatsāhacarya*—supports the Prācīna view that *there is the sāropa lakṣaṇā in Rūpaka*.

GAUNĪ: SĀDHYAVASĀNĀ (INTRO-SUSCEPTIVE)

The *sādhyaavasānā* variety of *lakṣaṇā* is illustrated by ‘*candrarāṇi virājate* : ‘there shines a row of moons’. Some hold that the word ‘*candra*’ conveys by the power of *lakṣaṇā face* with the delimiting adjunct—*mukhatva*—of the *lakṣyatā*, yet the face becomes the object of *śābdabodha* with *candratva* as the delimiting adjunct of the *lakṣyatā*. This is possible when we do not accept the rule that the recollection of the senses of the words and the *śābdabodha* of those senses should have the same *prakāras*. Others opine that the face is first known through *lakṣaṇā* as *face* (with faceness as the delimiting adjunct of the *lakṣyatā*) from the word ‘*candra*’ and is subsequently cognised through *vyañjanā* as *candra* (with *candratva* as the delimiting adjunct of the

10. Patañjali in his *Bhāṣya* under the Sūtra—*पुंयोगादाख्यायां* (IV. I. 48) says : ‘Since different objects do not possess identity, how is one thing spoken of as identical with other? This identity can be imposed under four conditions: (1) *tātsthya* (resting upon one another); (2) *tāddharmya* (possessing the same qualities); (3) *tatsāmīpya* (neighbourhood); and (4) *tatsāhacarya* (association). The *tātsthya* is illustrated by ‘*mañcāḥ hasanti*—the cushions smile’, where the identity between the cushion and the people in the cushion is imposed. (2) The *tāddharmya* is illustrated—*jaṭi Brahmadattaḥ*, where the actions of Brahmadatta are found in the patted-haired man and as such, the identity of *jaṭi* and Brahmadatta is imposed. (3) *tatsāmīpya* is illustrated by the ‘*Gaṅgāyām ghoṣaḥ*’ and (4) *tatsāhacarya* is illustrated by ‘*kuntān praveśaya*’ where the identity between the sticks or spears and the persons wearing them is imposed.’

vyāṅgyatā). In either case the face is known as *face* as it is known as *candra* ; and this is explained as the feature distinguishing the sādhyavasānā from the sāropā. Some others hold that just like in an invalid perception, the face is not known as *face* but is known as *candra*, and the distinctive feature of this is the non-cognition of the face as face (i.e.) of the object compared—mukha—with mukhatva as the delimiting adjunct of the viṣayatā. Jagannātha, however, contends that in certain instances of sādhyavasānā there arise among the sahṛdayas cognitions of viṣaya (face) in both the capacities of viṣaya and viṣayin (face and moon) and so, has shown his partiality for the first and second views.

Abhiṣeka-Nāṭaka

(An English Translation with Notes.)

K. R. PISHAROTI.

Abhiṣeka-Nāṭaka

ACT III

[Then enter Śaṅkukarṇa]

Śaṅkukarṇa. Who is there on guard at the Golden-gateway ?

[Entering]

Portress. Sir, I am Vijaya. What may I do ?

Śaṅkukarṇa. Inform, inform His Majesty, the Lord of Lanka, that the Aśoka garden is destroyed.¹ For,

That Aśoka garden, where our Lord's Queen, Maṇḍodari who delights to adorn herself, never plucks the tender sprouts on account of love, where the blowing *Malaya* breeze never blows on account of fear, where the young trees have never been touched even by hands—that Aśoka garden belonging to the enemy of Śakra has been demolished—so inform His Majesty. (1)

Portress. I have always been attending upon my lord and I have never before seen such trepidation. What is the matter ?

Śaṅkukarṇa. Madam, it's a serious matter. Go inform His Majesty quick.

Portress. Sir, I am informing.

[Exit

Śaṅkukarṇa. [Looking in front] Ha ! Here is His Majesty, Lord of Lanka, coming this way : who indeed :

is rushing along quickly in great anger like the Sun ready to burn down the world at the end of the *Yuga*, the lord whose

1. The description emphasises the loss sustained. The queen does not pluck a sprout for love and even the *Malaya* breeze dare not disturb it for fear. Naturally Śaṅkukarṇa is upset.

stern eyes are spotless like the lotus and who is preceded by bearers of golden-torches. (2)

[Then enter Rāvaṇa as described]

Rāvaṇa. What, what, ho, do I hear, O bringer of strange² news. Tell me now quick by which death-loving, bold and arrogant man have I been insulted by the destruction of my garden ? (3)

Śaṅkukarṇa. [Approaching] Victory, Your Majesty ! The Aśoka garden has been completely destroyed by a monkey who came all unknown.

Rāvaṇa. [With contempt] What ? By a monkey ? Go quick bring him a captive.

Śaṅkukarṇa. As Your Majesty orders.

[Exit

Rāvaṇa. Well, well³ :

If by Gods has this insult been done to me who have struck terror in battle unto all the three worlds, then shall they, who live on the elixir of life, soon suffer the consequences of their action born of wickedness. (4)

[Entering]⁴

Śaṅkukarṇa. Victory Your Majesty ! Your Majesty, very strong indeed is that monkey. The Śāla trees have all been crushed by him as if they were lotus stems ; the *Daruparvata* was broken by his fists ; the bowers of creepers were crushed in his palms ; the keepers of the *Pramadavana* were made unconscious by his mere roar. Be pleased, Your Majesty, to order an army strong enough to capture him.

2. The news is strange to Rāvaṇa. It is inconceivable that in his own city of Lanka and in his immediate presence anybody should come and tamper with his cherished garden.

3. That an unknown monkey caused the havoc only adds fuel to the fire. He takes a great vow to destroy the author of the mischief.

4. In what follows Śaṅkukarṇa describes step by step the havoc caused by Hanūmān : first the destruction of the garden, then that of the army a thousand strong, then that of the five commanders and prince Akṣa, and last the duel between Hanūmān and Indrajit, ending with the capture of the former.

Rāvaṇa. Order then an army a thousand strong to capture the monkey.

Śaṅkukaṛṇa. As Your Majesty orders. [*Going out and entering*] Victory, Your Majesty !

Our own strong soldiers have all been quickly killed with our own great trees by him who fought with trees. (5)

Rāvaṇa. What ? Killed, is it ? Order out Akṣakumāra to capture the monkey.

Śaṅkukaṛṇa. As Your Majesty orders.

[*Exit*

Rāvaṇa. [*Thinking*]⁵

My boy is bold, strong, and well-armed. He will capture the monkey by force or will kill him. (6)

Śaṅkukaṛṇa. [*Entering*] May Your Majesty be pleased to order another contingent of the army.

Rāvaṇa. Why ?

Śaṅkukaṛṇa. Listen, Your Majesty ! Seeing the prince rushing at the monkey the five commanders followed him, though Your Majesty did not order it.

Rāvaṇa. Well then !

Śaṅkukaṛṇa. Then seeing them rushing (at him), he retreated to the gate as if afraid and raising the golden gateway he killed with it the five commanders.

Rāvaṇa. Then, then ?

Śaṅkukaṛṇa. Then Akṣakumāra :

With his eyes blood-shot with anger, quickly drove his chariot yoked with fleet steeds and rained, like the season clouds, arrows on him in quick succession ; these arrows the

5. *Rāvaṇa* hopes that Akṣa will either capture or kill Hanūmān. The very expression of hope is an indication of his anxiety. See note following.

monkey shook off, then dashed into the chariot, caught him by the neck and with gladdened face killed him with his fist. (7)

Rāvaṇa. [With anger]⁶

What, what ? Killed is it ?

Wait now ; I shall myself go to that worm of a monkey and quickly reduce him to ashes in the fire of my anger. (8)

Śaṅkukarṇa. Be pleased, be pleased, Your Majesty ; Hearing that Akṣakumāra has been killed, prince Indrajit filled with anger has rushed against that monkey.

Rāvaṇa. So, then, go. Learn later news.

Śaṅkukarṇa. As Your Majesty orders.

[Exit

Rāvaṇa. The prince is, indeed, well-armed :

The valorous must in the field of battle either die or gain victory ; but this is mean work and I am a bit anxious.⁷ (9)

Śaṅkukarṇa. [Entering] Victory, Your Majesty ; Victory, Lord of Lanka ! Victory, O auspicious Monarch !

There was a terrific battle between the prince and himself.

Then quickly now has that Vānara been bound by a rope. (10)

Rāvaṇa. What wonder is there that a monkey was tied down by the victor of Indra ! Who is there ?

[Entering]

Rakṣasa. Victory, Your Majesty.

Rāvaṇa. Go, call Vibhiṣaṇa.

6. The news was a great shock to him. It is all the worse because a monkey killed the prince, and in righteous anger he starts himself for the fray.

7. The old cocksureness of Rāvaṇa is really ruffled. He admits to himself that he is anxious. A soldier expects no doubt victory or death in the field of battle. But here the enemy is so insignificant that there is no honour in either victory or death ; but at the same time, there is terrible risk.

Rākṣasa. As Your Majesty orders.

[Exit

Rāvaṇa. And you will go and bring that monkey.

Śaṅkukaṛṇa. As Your Majesty orders.

[Exit

Rāvaṇa. [Thinking]

Ha ! Alas !

The *Vānara* has entered Lanka taunting me—⁸ Lanka which is unassailable even in mind, even when accompanied by *Suras* and *Dānavas*. (11)

The three worlds with all the *Suras* and *Dānavas* I conquered in battle, and in my haughtiness I approached Kailasa and shook *Īśa* and his consort with all his *gaṇas*, surrounding him. I received benedictions from him, but was cursed by both the Mountain-daughter and Nandi for discourtesy. Can this be that curse of mine in the garb of a monkey ? (12)

[Then enter *Vibhīṣaṇa*]

Vibhīṣaṇa. [Wistfully] Alas, indeed, His Majesty's intellect has become perverted. For :

Many a time was it said by me—'Return *Maithili* unto him'. It is a source of sorrow for his well wishers⁹ that he does not listen to my words. (13)

[Approaching] Victory, Your Majesty !

Rāvaṇa. Come, *Vibhīṣaṇa*, come. Sit down.

Vibhīṣaṇa. Here do I sit down. [sit down]

8. This is an interesting soliloquy. For once *Rāvaṇa* feels non-plussed. He wonders if the powerful monkey can be the curse of *Parvāti* and *Nandi* incarnate.

9. This is a happy characterisation : *Rāvaṇa*'s actions have been a source of sorrow for his friends. The natural perversion of his intellect is a source of grief for *Vibhīṣaṇa* ; and this is now considerably enhanced by the first fruits of his vicious conduct. Hence he looks much depressed. Compare *Rāvaṇa*'s speech following.

Rāvaṇa. Vibhiṣaṇa, you look sorrow-stricken ?

Vibhiṣaṇa. Sorrow, indeed, is the share of those who depend on the master who will not listen to advice.¹⁰

Rāvaṇa. Stop that story. Go thou and bring the *Vānara*.

Vibhiṣaṇa. As Your Majesty orders. [Exit]

[Then enter Hanūmān held by Rākṣasas]

All. Ah, this way, this way.

Hanūmān. I am not conquered by him, the wicked Rākṣasa ; I myself allowed to be conquered in my desire to see the Lord of Rākṣasas.¹¹ (14)

[Approaching] O king ! Thou art well ?

Rāvaṇa. [Contemptuously] Vibhiṣaṇa, what is that work of his ?

Vibhiṣaṇa. Your Majesty, much more than that.

Rāvaṇa. How dost thou know it ?

Vibhiṣaṇa. Your Majesty may be pleased to ask him who he is.

Rāvaṇa. O *Vānara* ! Who art thou ? Goaded by what reason didst thou effect an entrance into our private quarters ?

Hanūmān. Ha ! Listen.

I am the direct son of Marut, born of Añjana. I am sent here by Rāghava and my name is Hanūmān.¹² (15)

Vibhiṣaṇa. Your Majesty ! Do you listen ?

Rāvaṇa. Well, what if I do ?

10. This is a vigorous reply and hence Rāvaṇa asks him to shut up.

11. Here Hanūman makes clear his position. He allowed himself to be captured.

12. Every word of his speech is significant. He announces his credentials who he is and whom he represents.

Vibhīṣaṇa. Hanūmān, what does the worthy Rāghava say ?

Hanūmān. Ah ! Listen to the commands of Rāma.

Rāvaṇa. What, what, the commands of Rāma ? Ah ! Kill him, that *Vānara*.

Vibhīṣaṇa. Be pleased, be pleased, Your Majesty ! Messengers are never to be killed, whatever their crime be. At least listen to Rāma's message and then do as Your Majesty thinks fit.

Rāvaṇa. Ah, *Vānara* ! What does that man say ?

Hanūmān. Ha ! Listen :

Resort thou to Śaṅkara, the best of shelters, or hide yourself in that impassable *Rasātala* ; I will send thee to the abode of Yama with your whole body cut up by my arrows.¹³ (16)

Rāvaṇa. Ha ! Ha ! Ha !

By divine missiles have the hosts of *Devas* been overcome by me ; all the *Dāitya* chiefs are at my beck and call ; Paulastya has been deprived of his *Puṣpaka* and humbled. How, then, can the human Rāma fight me.¹⁴ (17)

Hanūmān. If such art thou, why did you steal Rāma's wife in disguise ?¹⁵

Vibhīṣaṇa. Well has Hanūmān spoken.

You removed Rāma by your *Māya* ; disguised yourself as a mendicant, and carried her away in stealth. (18)

Rāvaṇa. Vibhīṣaṇa ! Dost thou espouse the cause of the enemy ?

Vibhīṣaṇa. Be pleased, O King, to listen to my beneficent words—
Return the wedded spouse of Rāma. I do not wish that this race is destroyed by you the best of *Rākṣasas*.¹⁶ (19)

13. Note the bold message he gives as if from Rāma.

14. Rāvaṇa makes light of it by a reference to his past greatness and says that Rāma cannot come against him.

15. Note the quick retort of Hanūman. It is unworthy of a hero as Rāvaṇa pretends himself to be to have stolen Sita and that under disguise. The same idea is further elaborated in the speech of Vibhīṣaṇa following.

16. Note the happy speech of Vibhīṣaṇa. He does not want the destruction of the Rākṣasa race and that at the instance of Rāvaṇa.

Rāvaṇa. Vibhīṣaṇa ! Enough, enough of your fears.

How can the lion with the flowing manes be killed by a deer, or a huge elephant in rut by a fox ? (20)

Hanūmān. Ho ! *Rāvaṇa.* With thy fortune wheeling round, it is not proper for you to speak of *Rāma* thus.¹⁷ Ho, not so !

O thou accursed *Night-prowler* ! O *Rāvaṇa*, it ill becomes thee with thy virtue waning and strength gone to speak thus lowly of *Rāghava*, the bravest amongst the brave, the equal of the Lord of *Devas*, and the sole Lord of the Universe. (21)

Rāvaṇa. What, what, does he call me names ? Kill that *Vānara*. Or, it is improper to kill a messenger. *Śaṅkukaṛṇa*, set fire to his tail and send him away.

Śaṅkukaṛṇa. As Your Majesty orders. This way, this way.

Rāvaṇa. Or, come here.

Hanūmān. I am here.

Rāvaṇa. Tell that man from me :

O *Rāma*, thou art insulted by me by carrying off your wife. If thou hast any reputation for bowmanship, offer me a great battle. (22)

Hanūmān. Soon shalt thou see :

With thy grand ramparts, gateways and streets destroyed, thou shalt be conquered by the mere twang of *Rāghava*'s excellent bow with your city with all its encircling lovers' gardens destroyed by the hosts of *Haris*. (23)

Rāvaṇa. Ah ! Away with that *Vānara*.

Rākṣasas. This way, this way.

[*Exit Hanūmān accompanied by Rākṣasas*]

Vibhīṣaṇa. Be pleased, be pleased, Your Majesty ! With Your Majesty's permission I desire to speak something.¹⁸

17. The comparison that *Rāvaṇa* made forces a retort from *Hanūman*.

18. The incident following is cleverly introduced. *Rāvaṇa* is made to banish *Vibhīṣaṇa* and so he takes refuge under *Rāma*. This touches up his character : or he would have to be branded as a traitor.

Rāvaṇa. Speak out. It is good. We are listening.

Vibhīṣaṇa. The ruin of the Rākṣasa race is very imminent, I believe.

Rāvaṇa. Why so ?

Vibhīṣaṇa. Through Your Majesty's indiscretion.

Rāvaṇa. What is that indiscretion of mine ?

Vibhīṣaṇa. Indeed the stealing of Rāma's wife.

Rāvaṇa. What harm can there be through the stealing of Sita ?

Vibhīṣaṇa. Sin and—

Rāvaṇa. The *and* suggests that your speech is unfinished. Speak out.

Vibhīṣaṇa. It is indeed true.

Rāvaṇa. Vibhīṣaṇa ! What is it thou hidest ? I curse you on my life, if thou wilt not speak the truth.

Vibhīṣaṇa. Your Majesty must promise me *Abhaya*.

Rāvaṇa. I grant thee *Abhaya*. Speak out.

Vibhīṣaṇa. And a fierce battle.

Rāvaṇa. [*Angrily*] What, what, fierce battle, is it ?

Espousing the cause of my enemy, this bold and accursed Rākṣasa is addressing me rousing my anger. (24)

Who is there ?

Disregarding all brotherliness, he espouses the cause of the enemy. I wish not to see him. Hence remove that fellow. (25)

Vibhīṣaṇa. Be pleased, be pleased, Your Majesty ! I shall myself go away.

Thou hast ordered me away, O King, and I am going away free of all guilt. Suppress your anger and your passion and act as occasion demands.¹⁹ (26)

19. The parting advice of Vibhīṣaṇa is quite worthy of himself and serves as a motto for every man of action.

[Wandering about] I shall even now

resort to that Lotus-eyed Lord amongst men, who carries the terrible bow, who has vowed the destruction of *Rāvaṇa* and who is famed for his care of his dependents and (shall) try to save the lost race of the *Rākṣasas*. (27)

[Exit.

Rāvaṇa. Ah ! Gone is *Vibhīṣaṇa*. I shall now look to the safety of the city.²⁰

[Exit.

ACT III ²¹

20. This is strange. *Rāvaṇa* feels that he himself must see to the security of his capital. This is an evident indication that the mischief wrought by *Hanūman* affected him in no small measure.

21. This has been very popular among the *Cākyars*, or professional actors, of Kerala, who stage it under the title *Toraṇayudha*. I was recently afforded an opportunity—and for this I tender my grateful thanks to the Vice-Chancellor—to witness the staging of this act during the annual *Kūṭiyāṭṭam* in the temple at Irinjalakuda, Cochin State. The technique of the staging is very interesting and affords glimpses of the indigenous mode of acting a Samskrit drama. While I reserve for a future occasion a detailed notice of this acting, I wish to set forth here the differences in reading which I was able to gather in the course of the performance.

1. Page 26 (TSS. No. 26—1913), verse 1, pada 3 : the *Cākyar* reads *ravikaraiḥ* instead of *api karaiḥ*.
2. Page 27 : verse 2, pada 2 : *dīpikāpurogaḥ* instead of *dīpikatpurogaḥ*.
3. Page 29 : verse 6 : he substitutes verse 9 on page 31 and reads *mahyamīṣan-manojvaram* instead of *mahyamīsā manojvarah*.
4. Page 30 : in line 4 he deletes *tataḥ* ; reads *kapi-kūṭakam* instead of *kapi-jantukam* in verse 8 ; adds the word *parikramya* before *niṣkrāntaḥ*.
5. Page 31 : substitutes verse 6 instead of 9 with the reading noticed above ; omits lines 4 & 5 ; in line 8 reads *baddhyate* instead of *baddhaḥ* ; and adds *śankukarṇa* before *tvāmapi*.
6. Page 32 : verse 12, pada 4 : he reads *dattam śāpam* instead of *dattam saptam*.

Manusyālayacandrika

(An English Translation with critical notes.)

K. R. PISHAROTI AND T. B. NAYAR

PREFATORY NOTE

The *Manuṣyālayacandrika* is a small hand-book on Indian architecture with reference to secular structures and is the accepted code for Kerala architects. Three editions of the text are available, one in Nāgari script published in the Trivandrum Sanskrit Series and two others in Malayalam script with commentaries. They offer some variant readings. It is proposed to publish the text also after finishing the translation.

MANUṢYĀLAYACANDRIKA

CHAPTER I.

[Section i: Benediction.]

In the abode of Rājarājamaṅgala¹ there shine glorious the twin lustres unrivalled in the form of Nṛsimha and Yādava. (1)

May these lustres all fill my mind—the lustres that beam² with ever increased radiance at Kaṇvapura,³ at Parakroḍa,⁴ in the temple at Nāva,⁵ in the village at Vallivihāra,⁶ in the temple of Aśvatha⁷ and in the village of Keralādhiśvara!⁸ (2)

There lives victorious the *Elephant-faced* deity, the son of the *Mountain-daughter*, "the receptacle of the great love of the Lord who is the resort of all good people and who is enshrined at Śrīmaṅgala"¹⁰—

1. A variant reads *rājadrāja*—instead of *rājarāja*. If this reading is accepted, the word *rājat* must be taken as qualifying *tejodvityam* and would mean *exceedingly shining*. The fact that there is no village of the name Rajarajamangalam in South Malabar indicates that the variant reading is correct. The temple in the village must evidently contain a double shrine, one dedicated to *Nṛsimha* and another to *Śrīkṛṣṇa* and of these the more important must be the former. Is this Rayamangalam in Tirumittakod village in Ponnani Taluk in South Malabar?

2. The Trivandrum edition reads *virājati* instead of *virājata*—.

3. A variant reads *Kuṇḍapura* instead of *Kaṇvapura*. This is the well-known Trikkandiyur, two miles to the south of Tirur railway station, South Malabar. It has an ancient Śiva temple. This village is famous in literary history as being the abode of the great scholar Acyuta Pisharodi, the *Guru* of Meppattūr Nārāyaṇa Bhaṭṭatiri.

4. This is the famous shrine at Triprangod, dedicated to Śiva. It is situate five miles to the south of Tirur railway station.

5. Nāva is the well-known Tirunavaya, close to the railway station at the 382nd mile from Madras, about half way between Tirur and Kuttipuram. There is an old shrine dedicated to Śrī Rāma. This is famous in all Malabar as being the place where the all-Kerala tests in Vedic proficiency are annually conducted.

6. A variant reads *malli* for *valli*. The reference is to the Mullepilli temple.

7. This is Alattur, now called Alattiyur in Triprangod village, South Malabar.

8. This is the village called Keralapuram, now called Keraladhisvarapuram, two miles south of Tanur railway station, South Malabar. There is an ancient Śiva temple in the locality.

9. Here an interpretation is made which would connect the expressions—*śrīmaṅgalāspada* and *sadāśraya*—with *mattamataṅgaḥasyah*. Such an interpretation is against the general tenour of language. If this view is accepted, then Maṅgala would be the abode of Gaṇapati and not, as we have interpreted, Śiva.

10. Maṅgala is a village near Tirur.

the God who is adored by all and who grants to his devotees all that they desire.¹¹ (3)

The writer, depending solely on the lotus-like feet of this God and devoted to learning was, however, moved (to undertake this work) of his own accord¹² for the instruction of the young,¹³ thanks to the radiating kindness of his noble *Guru*. (4)

I always adorn (myself) with the great and generous lotus-like feet of those shining ones of the earth,¹⁴ whose intelligence loves to dwell on the *Vedas* and whose conception¹⁵ endows even *Parameśvara* with a form. (5)

[Section ii: The basis of the work
and its scope.]

Having first bowed down to *Druhiṇa* who is naturally endowed with proficiency in all *Śilpas*,¹⁶ I am writing this *Manuṣyālayacandrika* for the benefit of the dull.¹⁷ (6)

11. The references above given clearly show that the author was a native of South Malabar. He was, according to one tradition, a native of Tirunavaya. If the alternate interpretation mentioned in note 9 be accepted, then we may have to conclude that he was a native of Maṅgala.

12. A variant reads *budhyāmu*—instead of *budhyā tū*. Does the author here imply a contrast to the author of the *Tantrasamuccaya*, which was written at the instance of Śrī Vikrama Deva of Calicut (1429 A.D.)?

13. A variant reads—*ne ca* for—*nāya*.

14. The reference is to Namputiri *Brahmins*. From the mode of reference, the author appears to have been a professional carpenter who studied the science under a Namputiri *Brahmin*.

15. This is an interesting reference. *Our Gods are our own creations*.

16. The term *nisargasamsidha* is variously interpreted. It may be taken to mean one who is proficient in all *Śilpas*, natural or devised. This explanation, ultimately meaning all things, *Sthāvara* and *Jaṅgama*, may be accepted, if *Druhiṇa* may be taken to mean *Brahma*. And this is the way it is usually understood. But *Druhiṇa* need not necessarily mean *Brahma*, for in chapter VI of the *Nāṭyaśāstra*, Bharata refers by this term to an ancient art-critic; and since we have so far not even any tradition, associating *Brahma* with art criticism, we may well assume that *Druhiṇa* may be the earliest author in the field of literary criticism. Architecture is also art, and in *Druhiṇa* we may probably see the earliest authority in this branch of knowledge. It is on this basis that we have given the rendering. As a matter of fact a natural interpretation also would point to the same idea, for the phrase *nisargasamsidha* would better go with *pravīṇa*: that is to say, *Druhiṇa* was naturally endowed with proficiency in all arts and crafts. And it is only in the natural fitness of things that our author should at the beginning make his obeisance to the father of Indian architectural science. Further, such a reference would also indicate that he is following the time honoured conventions.

17. He is writing the treatise for the sake of the dull-witted. He has already

¹⁸There shine victorious the two treatises of Maya, *Prayogamañjari*, *Nibandhana*, the two treatises of Bhāskara,¹⁹ and the works, called *Manumata*, *Gurudevapaddhati*,²⁰ *Śrīhariyajana*, and such other *āgamic* works.²¹ (7)

The two treatises of Markandeya, the two *Ratnāvalis*, composed by Parāśara and Murāri, (the *Tantrasaras*),²² the two schools of Kāśyapa and Viśvakarma, the *Kumārāgama*, the *Harisamkhita*, with its commentary, (the treatise) called *Vivaraṇa*,²³ the *Vāstuvidya* and others²⁴—

said that his object was *bālavibodhana*. By giving us the circle of readers that he intends his work for, he gives us the scope of his work. It is a first book to the science and it is also a hand-book. While this sets forth his modesty, this appears to be a necessary statement, particularly in view of the fact that he gives a long list of works later, which he says he has familiarised himself with.

18. The two verses together, following this, contain an interesting bibliography of works our author has consulted in the preparation of this treatise. Some at least of these works have yet to be discovered and some yet to be published. In any case we find that at the time of the author there was a large body of literature available on the subject. It is curious that there is no reference to the *Mānasāra*; the evident presumption is that this work was not popular in Kerala.

19. It is a point for consideration whether the phrase—*nibandhanabhāskariya-yugmam*—would refer to two works or three works or four works. It may be interpreted to mean as follows: (i) the pair of works, *Nibandhana* and *Bhāskariya*; (ii) *Nibandhana* and the two *Bhāskariyas*; (iii) the two *Nibandhanas* and the two *Bhāskariyas*. The exact interpretation would depend upon the presence or otherwise of the works mentioned. Local interpretation takes it as referring to three works. The term *Nibandhana* means an original treatise, and a work is referred to by this name; and we are inclined to think that the phrase means the two original treatises of Bhāskara and the *Nibandhana*.

20. There are two readings: *padhatih śrī-* and *padhatīśrī-*.

21. The second half of the verse is a *samastapada*. All the works mentioned are very ancient treatises on the subject and they are, according to our author, *Āgamas* on the subject. These works, therefore, constitute the traditional lore on the subject.

22. Here again there is scope for different interpretation. According to one school, the phrase means the works, called *Ratnāvali*, by Parāśara and Murāri and the works, known as *Tantrasāras*. Others would have it that the phrase means the synopses written by Parāśara and Murāri. The question cannot be decided in the present state of our knowledge of the subject.

23. Notice the variant readings: *vivaraṇākhyam* and *vivaraṇādyam*. The former of these seems to be the better reading.

24. Of the two readings *-dikān* and *-dikam*, the former is better.

after seeing²⁵ these treatises and following the *Tantrasamuccaya*,²⁶ a brief exposition is here made.²⁷ (8)

[Section iii : The preliminary procedure for house construction.]

The caste Hindu²⁸ who desires to construct a house should choose as his *Guru*²⁹ a local *Brahmin*, possessing all virtues ; who should then

25. Seeing here means studying. Otherwise, the list serves no useful purpose.

26. The last *pāda* is important, for here we get the lowest limit of our author : he could not have lived earlier than 1429 A.D. when the *Tantrasamuccaya* was written. The verse is also important in that our author says that he has accepted the fundamentals of the science as formulated in the ancient *Āgamic* works and that he has adapted them to the needs of Kerala on the basis of the *Tantra-samuccaya*. Consequently, not only is this a hand-book for architects of Kerala, but it also shows that Kerala architecture is a lineal descendant of the Indian architecture.

27. A detailed study of the works mentioned here will be made in the introduction. Of the various works mentioned here, some notices may be had in the Dictionary of Hindu Architecture by Prof. P. K. Acarya regarding Maya, Kāśyapa and Viśvakarma, and excepting these none other is mentioned under the *Āgamic* treatises, even though our author treats as *Āgamas* the treatises of Bhāskara, Manu and Gurudeva and the work, called *Prayogamañjari*, which last apparently has been a very popular work in Kerala.

28. Here is an interesting point for consideration. The author here lays down that when one belonging to the castes, i.e., a *Savarna*, desires to build a house, he must first choose a *Brahmin* as his *Guru* who should then get the house built according to the injunctions laid down in the *Śāstras*. Why is this reference to caste Hindus and what is its significance ? Are we to understand that caste Hindus alone need conform to the *Śāstras* ? This seems to be correct, if we may take our stand on current practice. Or does this restriction apply only to the choice of the *Guru* ? This is quite sensible, because we cannot expect a *Brahmin* to function as the *Guru* of a non-caste Hindu. Or, can it be that since the science of architecture deals with the building of caste Hindu houses, religious and secular, it has reference only to caste Hindu houses and not to those of non-caste Hindus ? These latter may, or may not, follow these injunctions. We may here see another local convention : even at the time of the advent of the Portuguese and afterwards until the middle of the sixteenth century at least, if not later, the local convention required that houses of wood and stone were built only for Gods and kings. Every one else had to live in mud houses, that is, temporary houses. Consistent with this convention of the locality, when the Portuguese built their fort, they handed it back to the King of Cochin as a present and then took it back from him to use it as a source of protection for themselves and himself and his subjects. Can we not find in this the basis of the old historical convention ? These rules do not apply to non-caste Hindus, for the simple reason that they lived only in temporary houses during that time. If this point of view may be accepted, here have we a clue to the date of the author : he must have lived when this convention was in full force.

29. Note the qualification laid down for the *Guru*. Apart from the fact that

choose a plot suitable for the caste and offer *Vāstupāja*³⁰; and then get the house built in accordance with *Śāstraic* injunctions by proficient architects.³¹ (9)

By *Brahmins* who know well what is laid down in the *Vedas* and *Āgamas* must be laid down the principles of religious and secular structures.³² In all structures the function of the carpenter and the mason is simply to carry out the work of putting together wood and masonry work³³ under their instruction. (10)

[Section iv : The characteristics of the specialists engaged in the work.]

³⁴*Sthapati*, *Sūtragrāhi*, *Takṣaka* and *Vardhaki*, each clever in his own special work, are in order the four classes of artisans to be chosen. (11)

he should be virtuous, he must be familiar with local conditions. This is an important proviso. A building has to be designed with special reference to the conditions obtaining in the particular place and with reference to the functions of the people for whom it is intended. Further, it should also conform to the standards and conventions of architecture generally accepted in the locality. In other words, we have here an implied convention that the structure should be indigenous and not exotic.

30. The subject will be dealt with in detail later. The *Vāstu* is conceived as being predominated by the *Vāstu-puruṣa*, a cruel demon, who was felled down of yore by all the *Devas* who are now supposed to be sitting upon him as he lies prostrate. See *Vāstuvīdyā*, Chapter IV, verses 47-52; notes in the translation by Pisharoti and Menon, *Calcutta Oriental Journal*, Vol. II.

31. The presence of a noble local man, well-versed in the principles of the science of architecture ensures for the structure conformity to local standards, modes, designs and technical details. The accordance to *Śāstraic* injunctions secures for it a continuity with traditional conventions and styles, while the insistence upon clever workmen, carpenters and masons, ensures economy, strength and beauty consistent with utility.

32. This is a very important idea. At the time of the author all knowledge was in the hands of the *Brahmins*, both theoretical and practical, religious and secular. The reference to the *Vedas* is here probably meant only to give the sanction of a great name to the science of architecture, though the *Vedas* as a whole throw some light on the beginnings of this science. The *Āgamas* came later and they contain the codified knowledge of architecture, including sculpture, and therefore a familiarity with them was a necessary condition for any one to be able to lay down the principles of religious and secular structures.

33. A variant reads *mṛcchilādeḥ* for *mṛcchilādyaḥ*.

34. From the general tenour of the verses, one is inclined to think that the author is dividing skilled workmen into four classes, the *Sthapati* and the rest.

He is *Sthapati*, the truthful, who is clever in all kinds of work laid down in all sciences, who is always conscientious³⁵ and pure, virtuous and void of jealousy and (such) other (evil passions).³⁶ (12)

Sthapati is to be known as the director of the structure ; comparable to him, generally, in virtues is the *Sūtragrāhi*, his son or disciple, who knows the views of the *Sthapati*³⁷; the ever content *Takṣaka* is so called because of his fashioning things tangible. The careful *Vardhaki* is held to be clever in joining wood and other materials. (13)

Without these four, *Sthapati* and the rest, it is not possible to get any house constructed.³⁸ Hence the shrewd *Brahmin* must please them and get³⁹ houses constructed by them. (14)

[Section v : The importance of following regulations.]

Evils certainly befall those who dwell in a house which does not conform to regulations.⁴⁰ Hence the whole (structure) from the base-

From their characterisation it will be found that all of them are not skilled workmen. But from verse 15, it is seen that the *Brahmin Guru* chosen must get these four types of workmen to carry out the work. Architectural treatises, like the *Vāstuvidyā*, would have it that these four classes are not skilled workmen in the general sense of the term : they are simply experts in different branches of work, such as designing, drawing, joinery, etc. Here, then, is some amount of confusion on the theoretical side, but on the practical side, there is complete accommodation. For, here all workmen are classed together, and each is again classed under a particular type according to his skill in one or other of the sections of the work. This is quite in keeping with the conditions in Kerala, where workmen are called *Āśāris* and these are differentiated as *Taccan*, *Kaṇakkan*, etc. As a matter of fact in everyday practice, the *Taccan* combines in himself the functions of the *Sthapati* and *Sūtragrāhi*, and the oldest member among the workmen generally functions as *Taccan*.

35. A variant reads *sarvadāvahita* instead of *sarvadā vihita*.

36. The other evil passions are *kāma*, *krodha*, *mada*, *moha*, etc.

37. This is an important proviso for he must give effect to the views of the *Sthapati*. He is the man at the spot to carry out the work, and all other workmen are under his control.

38. Compare the last two verses of the *Vastuvidyā*, Chapter I (Pisharoti and Menon's Translation : COJ., Vol. I—June.).

39. A variant reads *kārayatām* instead of *kārayatāt*.

40. Here our author simply echoes the accepted conventions, probably based on practical experience. For, it is well-known that some houses have earned a proverbial notoriety as being unlucky.

ment to the crown⁴¹ must be first conceived in mind and then the work begun.⁴² (15)

[Section vi : The preliminary items of work to be done when the construction of a house is proposed.]

Then in order is to be made the examination⁴³ of the site, its orientation, and the choice of the auspicious *Vīthis*,⁴⁴ and this is to be followed by the laying down of the rules regarding the measures, the court-yard, the basement, and the other *Āṅgas* as well as the external (structures).⁴⁵ (16)

[Section vii : Choice of site.]

That site is held to be excellent which is rich in cows and men, in trees abounding in fruits and flowers and juice, which is even and dipping eastwards, which is soft, produces a firm sound, has water flowing in a circumambulating direction and is rich in water, in which seeds quickly sprout up and the soil is dense and which is neither too hot nor too cold. The opposite of this is *Adhama* ; and the mixed is *Madhyama*. (17)

A site which is circular or crescent-like, or has three corners or five or six, or has the form of a trident or a seive or has a surface like the fish, elephant, tortoise, or a cow's head, which has in it ashes, charcoal, husks, bones and hair, which has vermins⁴⁶ and ant-hills, which is low in the centre, which has subterranean cavities, which has a bad odour and which faces a corner—such a site is to be shunned.⁴⁷ (18)

41. Another reading is *janmādyavasānāntam* instead of *janmādyapidhānāntam*. Both convey the same idea. *Pidhāna* literally means the cover or lid ; here it evidently means the roof of the structure. As being more technical, we accept the latter reading.

42. The second half of the verse must stand by itself, for here he switches off to another topic, the need for preliminary work.

43. These constitute the preliminary work, when the building of a house is decided upon. In the following the author details each one of these items.

44. A variant reads *parigrahā ca* instead of *parigrahśca*.

45. By external structures are meant those like cattleshed, tank, well, etc.

46. A variant reads *citi* instead of *kṛmi*.

47. Here are set forth the general features of a site to be chosen for dwelling houses ; and here one can see the reason underlying the choice. Compare the details mentioned in the *Vastuvidyā*, Chapter I.

[Section viii : Description of Vīthis.]

The eight Vīthis—Govīthi, Agnivīthi, Yamavīthi, Bhūtavīthi, Jala-vīthi, Nāgavīthi, Gajavīthi, Dhānyavīthi—these, in order, dipping from the west to the east, bring to the dwellers therein prosperity, loss of wealth, loss of self, loss of wealth, poverty, loss of children, wealth and happiness.⁴⁸ (19)

[Section ix : The rise and slope of the site and their effects.]

A site with a low-lying centre leads to exile ; that with a rising centre, to destruction of wealth, happiness, etc. ; and that which slopes in the directions, beginning with the *Agni* (corner) and ending with the *Vāyu* (corner) generally causes poverty.⁴⁹ (20)

A house that is built on a site with a rising centre or with rising east leads to prosperity for the first ten years ; with rising south-east and south, for hundred years ; with rising south-west, for a thousand years ; with rising west, for five hundred years ; and if it is built on a site (with a rise) in the other three corners it will bring in order prosperity for twelve, eight and six years⁵⁰ and then the fruits⁵¹ originally associated with them.⁵² (21)

[Section x : The presence of trees and the consequent effects.]

The presence of *Bakula* (*Mimusops Elenji*) and *Vaṭa* (*Ficus bengalensis*) in the east, of *Udumbara* (*Ficus glomerata*) and *Ciñca* (*Tamarindus indica*) in the south, of *Pippala* (*Ficus religiosa*) and *Saptaccada* (*Alstonia scholaris*) in the west and *Plakṣa* (*Ficus Infectoria*) and *Nāga* (*Rottlera tinctoria*) in the north, is auspicious. And it is particularly good to have in order from the east *Panasa* (*Artocarpus*

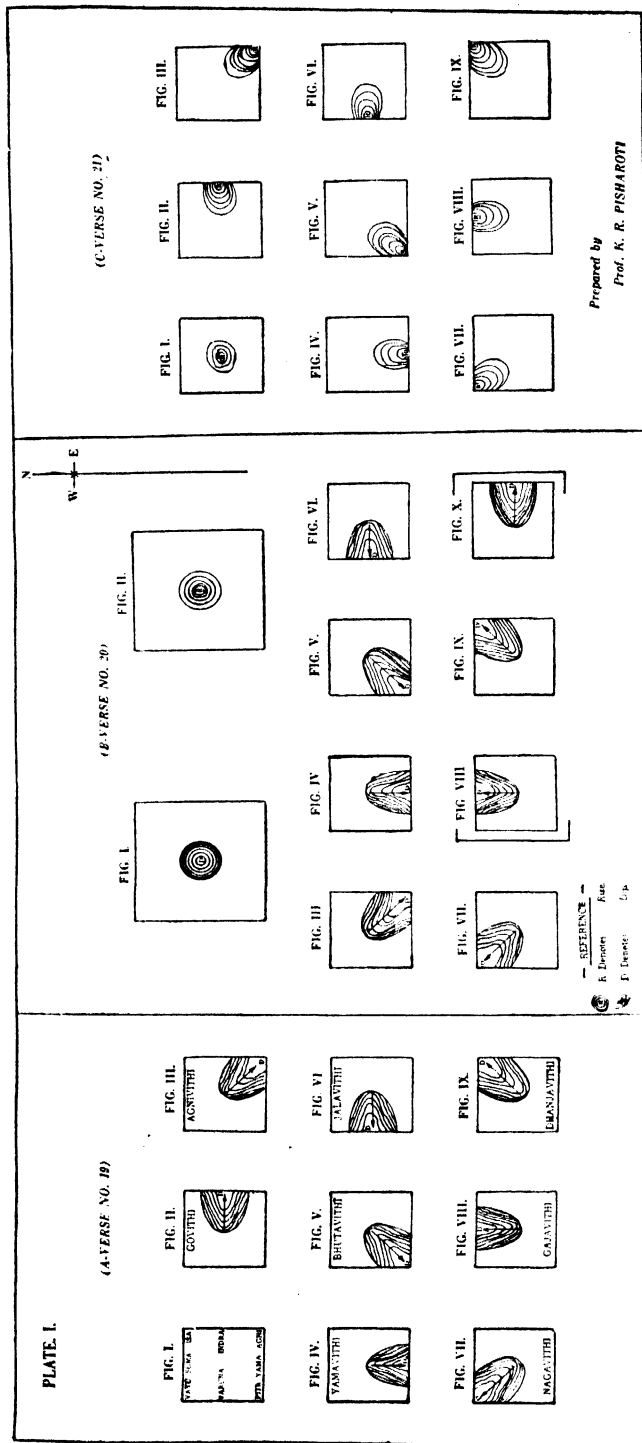
48. The Vīthis are not mentioned in the *Dictionary of Hindu Architecture*. Those mentioned in the *Vāstuvīdyā* do not agree with what is given here. Both these authors accept the general principle that sites sloping northwards and eastwards are auspicious.

49. See Plate I-A.

50. This idea is not found in the *Vāstuvīdyā*.

51. It will be noticed that to the sites with these dispositions have already been assigned certain effects in the preceding verse. These effects the dwellers will realise after the period specified here. Thus sites with rising centre and east have loss of wealth and prosperity associated with them, but for the first ten years, they would bring prosperity.

52. If we compare these three verses, we find in the first place a series of



integrifolia), *Pūga* (*Areca catechu*), *Kera* (*Cocos nucifera*) and *Cūta* (*Mangifera indica*). (22)

Āsvatha (*Ficus religiosa*) involves fear from fire; *Plakṣa* (*Ficus infectoria*) causes madness; *Nyagrodha* (*Ficus bengalensis*), fear from enemies; *Udumbara* (*Ficus glomerata*), stomach-ache; when these

eight types where the opposite sides rise and dip and amongst them only three types are held to be auspicious, those dipping north, east and north-east. In the second series, we have only types which slope. It is to be noticed here that the series is not complete because no reference is made to those which slope north, north-east and east. We may possibly assume that these are auspicious on the basis of the preceding series and this is in general agreement with the principle already laid down that sites dipping northwards and eastwards are held to be good. Again in this series we have mention made of a site which rises towards the centre and this is inconsistent with the rest which only slope. Because of the absence of the three types, sloping northwards, north-eastwards and eastwards, because of the reference to one type rising—and note this type is again mentioned in the following verse, one may be inclined to raise the question of the validity of this verse. Coming to the third series, we have nine types noticed, sites having a rise. The first of the series then deals with types which have both a rise and dip, the second, with those having only slope and the third, with those having rise only. These various types are tabulated below:

Verse 19.				Verse 20.			Verse 21.		
No.	Rise	Dip	Result	Rise	Dip	Result	Rise	Dip	Result
1.	W	E	Prosperity	(E)		Prosperity	W		Prosperity
2.	N.W	S.E	Loss	S.E.		Poverty	N.W.		Poverty
3.	N	S	"	S		"	N		Prosperity 12 yrs.
4.	N.E.	S.W.	"	S.W.		"	N.E.		" 6 "
5.	E.	W	"	W		"	E		" 10 "
6.	S.E.	N.W.	"	N.W.		"	S.E.		" 10 "
7.	S	N	Prosperity	(N)		Wealth	S		" 100 "
8.	S.W.	N.E.	"	(N.E.)		"	S.W.		" 1000 "
9.				Centre		Loss	Centre		" 10 "
10.				Centre		Exile			

From the above it will be seen that generally speaking three types are prosperous in all the series and they are the first, the seventh and the eighth, while the rest are unlucky. In these prosperous types, there is both rise and dip; when there is only dip, there is no prosperity and when there is only rise, there is prosperity for a fixed period. For the rest there is ill-luck, except during the initial stages,

stand in places opposite to those above mentioned.⁵³ These and others, including golden trees, must be cut down if they stand nearer the house than twice their own height.⁵⁴ (23)

It is excellent⁵⁵ to have on either side of the house and behind, such trees as *Śrīvṛkṣa* (*Gmelina arborea*), *Vilva* (*Aegle marmelos*), *Vyādhigna* (*Cassia Fistula*), *Abhaya* (*Terminalia chebula*) *Āmalaka* (*Phyllanthus Emblica*), *Suradru* (*Pinus deodara*), *Palāśa* (*Butea frondosa*), *Aśoka* (*Polyalthia longifolia*), *Māleya* (*Santalum album*), *Punnāga* (*Calophyllum*), *Āsana* (*Terminalia tomentosa*), *Cambaka* (*Michelia champaka*), and *Khadira* (*Acacia catechu*). Similarly, it is good to have anywhere such creepers as *Kadali* (*Musa Sapientum*), *Nāga* (*Piper betle*), and *Mulla* (*Jasminum pubescens*). (24)

Such trees as *Panaśa* (*Artocarpus integrifolia*) are woody inside, *Cīñca* (*Tamarindus indica*) and teak (*Tectona grandis*) are woody throughout; *Tāla* (*Borassus flabellifer*), *Kera* (*Cocos nucifera*) *Kra-Cīñca* (*Tamarindus indica*) and teak (*Tectona grandis*) are woody outside; *Śigru* (*Moringa pterygosperma*), *Saptaccada* (*Alstonia scho-*

varying between eight and twelve years. In all the three columns all the series agree and so the difference mentioned in the third series may be due to the presence of the rise. If so the bad features of a site are to be explained on the basis of the slope of the land, not so much on the rise. It also deserves to be pointed out that the levels of a site are necessarily of four kinds: rising, dipping, rising and dipping and even. In the above scheme there is no mention made of the even level. Here then we are to understand that even level is good (cf. verse 17). Again it deserves to be pointed out that when a land slopes, there need not necessarily be a rise and *vice versa*: that appears to be the view taken by the author. Strictly this is impossible: it should, therefore, be taken to mean that there need not be any pronounced rise when there is a fall and *vice versa*. From this point of view the whole description must be understood as referring to pronounced falls or rises or both. As we have already mentioned, there is some scope for a textual reconstruction.

53. As before, the taboo of certain trees in the site appears to be based upon some conventions of old, except where they are based upon a sense of utility. A variant reads *cūtakera* for *keracūta*.

54. The injunction here laid down is eminently practical. In Kerala which is exposed to the full force of the South-west Monsoon, the presence of trees very near the house is very unsafe. In the first place the trees chosen must be strong enough to withstand the force of the winds, and secondly they must be planted far away from the houses at least double their own height, so that even if they be up-rooted, they should do no harm to the house.

55. A variant reads *sthāpyā* instead of *śastā*. This is no doubt better reading. Another variant reads *khadīrasta-* instead of *khadīrāsta-*.

laris), *Suradru* (*Pinus deodara*), *Kimśuka* (*Butea frondosa*), etc., have no woodiness. Of these the first variety must be planted half way round the house,⁵⁶ the second still beyond it, and the last further away from it. (25)

Kāraskara (*Strychnos nux-vomica*), *Āruṣkara* (*Semecarpus Anacardium*), *Kaṇḍakitadru* (*Flacourtia Cataphracta*), *Śleṣmātaka* (*Cordia obliqua*), *Kakṣadruma* (*Terminalia belerica*), *Pili* (*Careya arborea*), *Nimba* (*Azadirachta indica*), *Snuhi* (*Euphorbia antiquorum*), *Piśacadru* (*Trophis aspera*), *Hemadugdha* (*Ficus glomerata*)—these should never find a place in the compound of a house. (26)

[Section xi: The determination of the site with reference to the presence of temples, etc.]

In the rear and left of *Viṣṇu* shrines and in front and to the right of terrible deities such as *Bhadrakālī*, *Naraśimha*, *Śiva* and others of the kind, it is unlucky to have a dwelling house. Similarly it is unlucky, when the shrine is in a low place and when the house is either in front or to the right. It is not considered good to have for a house a greater height than that of the shrine.⁵⁷ Those who depend upon the shrines may have their houses near the shrine. (27)

The immediate proximity of corn-fields, mountains, temples, ocean, rivers, hermitages, cattle-pens (and rocks)⁵⁸ is in many ways dangerous

56. All trees are divided into four kinds, those that are internally woody, that are externally woody, that are all woody and that are not woody at all. In planting trees, the first variety must be planted half way between the house and its boundary, subject to the general rule already laid down that they should stand away from the house twice their own height. Then must come the all woody trees and still beyond the other two varieties. The whole assignment is based with reference to the sense of security. In planting cocoanut trees, as the practice obtains now, this rule is often violated; for they are found planted everywhere and it is held that a cocoanut tree will do no harm to anybody.

57. Mythological associations and local conventions will account for the restrictions imposed on the choice of a house site near temples. That there is nothing intrinsically wrong about it is clear from the exception given so far as the temple menials are concerned. Another local convention accounts for the proscription of buildings higher than the temple itself, provided they are situate within the temple *saṅketa*.

58. A variant reads *grāma* for *grāva*: *atiśubhadamidam* for *idamatiśubhadam*; *ayam* for *alam*.

to dwelling houses.⁵⁹ Similarly, dwelling houses that are shorter than, or equal in height to, temples are auspicious. That which is taller and is of more than one floor is not desired. (28)

[Section xii: Preference for sites according to castes.]

⁶⁰The sites that have a natural growth of *Kuśa* grass (*Poa cynosuroides*), *Dūrva* (*Panicum Dactylon*), and *Kāśa* (*Saccharum spontaneum*); that have equal sides, that have their length greater than their breadth by one-eighth, one-sixth, and one-fourth; that have their soil white, red, yellow and dark in colour; that have the scent of ghee, of blood, of food, and of liquor and the tastes of *Svādu* (sweet), *Kaṣāya* (astringent), *Tikta* (bitter) and *Kaṭu* (pungent)—are prescribed for *Brahmins* and the rest. (29)

⁶¹The site which is high in the south and low in the north and is rich in *Udumbara* (*Ficus glomerata*) is good for *Brahmins*; that which is high in the west and low in the east and is rich in *Caladala* (*Ficus religiosa*) is good for *Kṣatriyas*; that which is low in the west and high in the east and rich in *Vaṭa* (*Ficus bengalensis*) is good for *Vaiśyas*; the same is good for *Sūdras* if there be *Plakṣa* (*Ficus infectoria*). That which is high in the north and low in the south is good for none.⁶² (30)

59. The taboo regarding the building of houses near oceans and rivers is the result of practical experience. Houses near the seashore are open to tidal waves and erosions and those near river banks, to seasonal floods. From the point of view of hygiene dwelling houses must not be in the vicinity of cattle-pens, a fact often completely ignored in India. Hermits require peace and calm, conditions which the atmosphere of dwelling houses in the vicinity does not admit. Houses near rocks are no doubt unpleasant, particularly in the hot weather, while those near mountains are in perpetual danger from wild animals.

60. These ideas are not found mentioned in the *Vāstuvīdyā*.

61. The general direction given goes against the preferences already mentioned. The site with the rising east and sloping west has been condemned as producing poverty, and this is now prescribed for *Vaiśyas* and *Sūdras*. This is strange, unless it is presumed that the presence of particular trees would mitigate the evils thereof. This is expecting too much, particularly because trees are liable to be cut down. The rationale of this is not easy to understand.

62. A variant reads *varjyāḥ* for *varjyā*.

[Section xiii: Procedure to be adopted when the site presents mixed characteristics.]

When the site is mixed in shape, in colour, in odour, and in taste, it is to be avoided by all. If the characteristics are not clearly perceived, the site is to be examined at night in the following way. (31)

⁶³Dig a pit in the centre (one cubit in dimensions) and place therein an unbaked pot filled with grain; cover its mouth with a platter, sprinkled with ghee and with coloured wicks (arranged in all the four sides) in the order of *Brahmins* and the rest, white towards the east, red towards the south, yellow towards the west, and black towards the north and light them properly. If after a short interval⁶⁴ the white wick burns, it is good for *Brahmins*; if red, for *Kṣatriyas*; if yellow, for *Vaiśyas*; and if black, for *Sūdras*. If all the wicks are burning, it is good for all castes, and if all have gone out, it is good for none. (32)

Fill the pit with water and drop into it the flowers of the *Droṇa* (*Leucas Linifolia*). If these flowers⁶⁵ move about in a circumambulatory direction, it is good; otherwise, it is condemned. If they come and halt in a quarter, it is auspicious, but if in a corner, it is to be condemned. After having thus known the good and bad, the wise should level the ground. (33)

(End of Chapter I)

63. The direction here given to find the good nature or bad of a site by means of an experiment is really as conventional as the preference itself. The two experiments may at the most tell us about the direction of the wind, but nothing more. But the direction or the force of the wind has never been mentioned as a basis of differentiation. Evidently here also we have conventions of a superstitious character at work.

64. The original term *muhurta* may also be taken as meaning 48 minutes. But if it may be understood in that sense, mere sprinkling of ghee in the platter would not suffice.

65. The term *sumanasām* may be taken also in the sense of good men. If this idea may be accepted, the site becomes good for good men.

Trimsacchloki

(ṬĪKASAHIṬĀ)

EDITOR : K. R. PISHAROTI.

EDITOR'S NOTE.

The *Trimśacchlokī* with the commentary that is here published for the first time was discovered by my revered uncle, Punditarāja K. Rama Pisharoti, and handed over to me for publication. The text is a small treatise in thirty *kārikās* which expound the full significance of such expressions, as *na ca . . . iti vācyam*, *nanu . . . iti cenna*, *yadyapi . . . tathāpi* etc., which find a prominent place in *Śāstraic* writings, and which, therefore, forms an important contribution to our dialectic literature. The work is practically unknown in the north and so we may assume that the author is a southerner, though unfortunately nothing more is known of him. The *Ṭīkā* is written by one Paṭṭābhirāma Śāstri. He is the disciple of one Nṛsimha Śāstri who is the author of a commentary, called *Prabhā*, on the *Muktavali* ; and he has also written commentaries on the *Muktāvali*, the *Sangraha* and the *Dīpikā*. He appears to have flourished in the latter part of the 18th century.

Department of Sanskrit,
Annamalai University,
Annamalainagar,
1st. August, 1935.

K. RAMA PISHAROTI,
Professor of Sanskrit.

त्रिंशच्छ्लोकी

(पट्टाभिरामकृतटीकासहिता)

आम्नायमौलिषु विचक्षणमानसेषु

न्यग्रोधसीम्नि पुरतश्च दृशोर्ममैकम् ।

यद्वस्तु वास्तवमनस्तमितप्रबोध-

माशास्महे तदिदमद्भुतशक्ति किञ्चित् ॥ १ ॥

सिद्धान्ताः परमभ्यधायिषत यैः श्लोकैरिह त्रिंशता

तानेतान् विशदीकरोमि न ततो दोषो गुणो वापि मे ।

सिद्धान्तो यदि वा तदन्यविषयः सम्पद्यतां तावता

श्लाघामूलकृतोऽथवा परिभवो राज्ञो यथा सैन्यतः ॥

वक्ष्यमाणार्थानां प्रामाणिकत्वमुपपादयन् प्रयोजनप्रदर्शनपूर्वकं निरूपणं
प्रतिजानीते ।

मू० स्वानुभूत्येकशरणा विषयाः पूर्वपक्षिणाम् ।

उच्यन्ते तत्रतत्रार्थाः श्लोकैर्द्वात्रिंशता मया ॥ १ ॥

नन्वेतन्निष्ठनिरूपणस्य किं प्रयोजनमत आह—विषया इति ॥ पूर्वपक्षिणां
विदुषां सभासु पूर्वपक्षं पातयताम् । विषयाः पर्यनुयोज्यतया रहस्यत्वेन गोपनीया
इत्यर्थः ॥ नन्वस्य पदस्य कोऽर्थ इति पूर्वपक्षं पातयन्तं प्रति त्वया वक्तव्यमिति
यदि वादिनः पर्यनुयुञ्जीरन् तदा किं वक्तव्यमत आह—स्वेति ॥ तदा विलक्षण-
मुखविकारभ्रूकौटिल्यशिरःकम्पहस्तचेष्टादिभिरभिनीयमानानुभवैकप्रमाणतयाऽयमर्थोवक्तव्य
इत्यर्थः ॥ १ ॥

मू० न चेति वाच्यं बोधोऽत्र विषयः पूर्वपक्षिणाम् ।

बहवो बहुधा तत्र वादिनः संप्रचक्षते ॥ २ ॥

अत्र एषु मध्ये ॥ २ ॥

मू० ण्यलक्ष्यमानताभेद्यनञ्गुभातृक्तिभाकृतः ।

विशेष्योऽर्थ इतेः पूर्वविशेष्यस्थं विशेषणम् ॥ ३ ॥

अत्र प्रथममुदाहरणवाक्यार्थं परिष्कृत्य अनन्तरं श्लोकार्थं उच्यते । अत्रोदाहरणम्—नच पाषाणे गन्धवत्त्वं नास्तीति वाच्यम् ; तत्रापि पृथिवीत्वेन गन्धानुमानात् । इति ॥ पाषाण इति सप्तम्यर्थो निरूपितत्वम् । वृत्तित्वमसधात्वर्थः । आख्यातार्थश्चाश्रयत्वम् । नञर्थश्चाभावः । पाषाणनिरूपितवृत्तिताश्रयत्वाभाववान्गन्ध इति नास्त्यन्तार्थः ।

ननु असधातुना किं सामान्यतो वृत्तित्वं प्रतिपाद्यते ; उत संबन्धविशेषावच्छिन्नवृत्तितात्वरूपेण । नाद्यः ; कालिकसंबन्धेन गन्धस्यापि पाषाणवृत्तितात् । न द्वितीयः ; असधातोर्नानार्थकत्वापत्तेः । अथ वृत्तितात्वमेवासधातुशक्यतावच्छेदकम् । प्रकृते तु संबन्धविशेषावच्छिन्नत्वेन लक्ष्यते । अथवा समवायेनेत्यादिसंबन्धबोधकतृतीयान्तपदमध्याहर्तव्यम् । तदवच्छिन्नत्वं तृतीयान्तार्थो वृत्तित्वेऽन्वेतीति चेन्न ; तथा सति सामान्ये समवायेन गुणो नास्तीति वाक्यस्याप्रामाण्यापत्तेः । सामान्यनिरूपितसमवायसंबन्धावच्छिन्नवृत्तित्वाप्रसिद्धेः ॥ अथ सामान्ये समवायेन गुणो नास्ति ; पाषाणे समवायेन गन्धो नास्तीत्यादौ सामान्यनिरूपितत्वस्याभावो वृत्तित्वे बोद्धव्यते । न तु तन्निरूपितवृत्तित्वस्याभावो गुणादौ ; अतो नानुपपत्तिः । न च सामान्यादौ गुणवत्तां गुणादौ सामान्यसमवेतत्वं वा सन्दिहानं पुमांसं प्रति तादृशवाक्यप्रयोगात् तादृशसन्देहविरोधिबोधजनकत्वं तस्यावश्यकम् ; तच्च न संभवति । सामान्यानिरूपितसमवायसंबन्धावच्छिन्नवृत्तित्वनिश्चयेऽपि सामान्यनिरूपितसमवायसंबन्धावच्छिन्नवृत्तित्वसन्देहस्यापि संभवात् । सामान्यानिरूपितसमवायसंबन्धावच्छिन्नवृत्तित्वस्य गुणत्वावच्छेदेनान्वयं स्वीकृत्य तादृशवाक्यस्योक्तसंशयनिवर्तकत्वमपि न संभवति । तादृशनिश्चयेऽपि एक एव गुणः सामान्यादन्त्यत्र सामान्ये च समवेतस्स्यादिति संभावनाया अनिरासेन पूर्वोक्तसन्देहनिवर्तकत्वासंभवात् इति वाच्यम् । सामान्यनिरूपितत्वाभावस्य गुणनिष्ठसमवायसंबन्धावच्छिन्नवृत्तितात्वावच्छेदेनान्वयं स्वीकृत्य तादृशसन्देहनिवर्तकत्वोपपादनसंभवात् । गुणनिष्ठसमवायसंबन्धावच्छिन्नवृत्तितात्वावच्छेदेन सामान्यानिरूपितत्वनिश्चये सति सामान्ये गुणाभावनिश्चयस्याप्यौचित्यावर्जनीयतया तत्संशयाभावादिति चेन्न । एवमप्याकाशं सामान्ये समवायेन नास्ति इति वाक्यस्याप्रामाण्यापत्तेः ; सामान्यानिरूपितस्यापि समवायावच्छिन्नवृत्तित्वस्य गगने बाधात् । यत् सामान्ये समवायेन गगनं नास्तीति

वाक्यस्य प्रामाण्योपपत्तये तत्र नञर्थस्य वारद्वयं भानमङ्गीकृत्य सामान्यानि-
रूपितसमवायसंबन्धावच्छिन्नवृत्तित्वाभाववत् गगनं इति बोधं स्वीकुर्वन्ति ; तन्मन्दमिव प्रति-
भाति । अविलक्षणानुपूर्वीस्थले बोधवैलक्षण्यस्य संप्रदायविरुद्धत्वात् ; पृथिव्यां समवाये न गन्धो
नास्तीति वाक्यस्य प्रामाण्यापत्तेः ; जले समवायेन गन्धो नास्तीति वाक्यस्याप्रामाण्यापत्तेश्च ;
तादृशवाक्यजन्यशाब्दबोधस्य सामान्यादिविशेष्यकसमवायादिसंसर्गकगगनादिप्रकारकसंशय-
विरोधित्वानुपपत्तेश्च ।

अत्रोच्यते । “सामान्ये समवायेन गुणो नास्ति”, “सामान्ये समवायेन
गगनं नास्ति” इत्यादिवाक्यानामप्रामाण्यमिष्टमेव । परन्तु तादृशवाक्यजन्यो
भ्रमात्मक एव शाब्दबोधः सन्देहनिवर्तकः । नचैतत्सकलग्नन्धकारमतविरुद्धमिति
वाच्यम् । “आकाशं न पश्यति चैतः”, “आकाशं न पश्यति जात्यन्धः” इत्यादि-
वाक्यानां शशश्रृंगं नास्तीतिवाक्यतुल्ययोगक्षेमतयाऽप्रामाण्यमभ्युपगच्छतां गदाधरभट्टाचा-
र्याणामेतद्वाक्याप्रामाण्यस्याभिप्रेतत्वे बाधकाभावात् ॥ यत्तु भूतले घटो नास्तीत्यत्र
घटाभावो भूतलवृत्तिरिति नञर्थमुख्यविशेष्यकबोधः समवायेनेति तृतीयान्तार्थः
तदवच्छिन्नप्रतियोगिताकत्वमभावान्वयी । तथा च सामान्ये समवायेन गगनं
नास्तीत्यत्र समवायसंबन्धावच्छिन्नप्रतियोगिताकगगनाभावः सामान्यनिरूपितवृत्ति-
त्वाश्रय इति बोधसंभवान्नानुपपत्तिरिति । तत्र । तथापि भूतले घटो न समवैतीत्यत्र
कीदृशो बोधः ? । न तावद्घटाभावो भूतलवृत्तिरिति । समवेत्युपसर्गद्वयपूर्वकेधातोः
समवायसंबन्धावच्छिन्नवृत्तित्वार्थकतायाऽनुभवाधीनत्वेन घटाभावस्य भूतलसमवेतत-
याऽप्रामाण्यापत्तेः । न च तत्र भूतलसमवेतत्वाभाववान् घट इति बोध इति वाच्यम् ।
तथा सति सामान्ये गगनं न समवैतीति वाक्यस्याप्रामाण्यापत्तेः । न च त्वयेव मयापि तादृश-
वाक्यस्य प्रामाण्यं नाभ्युपेयत एव सामान्ये समवायेन गगनं नास्तीति वाक्यस्य प्रामाण्य
एवास्माकमाग्रह इति वाच्यम् । न समवैतीत्यस्य समवायेन नास्तीति वाक्येन विवरणस्य
सकलग्नन्धकारसम्मतत्वेन सामान्ये गगनं न समवैति सामान्ये गगनं समवायेन नास्तीति
वाक्ययोः पर्यायतया तयोरेकतरस्य प्रामाण्यमपरस्याप्रामाण्यमित्यद्वैतजरीन्यायहेयत्वात् ॥
यत्तु भूतले घटो नास्तीत्यत्र भूतलान्वितसप्तम्यर्थविशेषितस्याभावस्यासधात्वर्थप्रति-
योगितायामन्वयात् भूतलवृत्त्यभावप्रतियोगी घट इति बोधः । समवायेनेत्यादि-
तृतीयान्तार्थस्तदवच्छिन्नत्वं प्रतियोगित्वान्वयी । न समवैतीत्यत्र तु समवायसंबन्धा-
वच्छिन्नप्रतियोगित्वमेव धात्वर्थः । इत्थं च सामान्यवृत्त्यभावीयसमवायसंबन्धा-

वच्छिन्नप्रतियोगितायाः गगने सत्त्वान्न काप्यनुपपत्तिरिति । तदशुद्धम् । नञ्समि-
व्याहारे यत्पदार्थस्य यत्पदार्थे येन संबन्धेनान्वयः, तत्संबन्धावच्छिन्नप्रतियो-
गिताकतदभावः तद्विशेषणतया बोद्धव्यते नञेति व्युत्पत्तिविरोधात् । भूतले घटो नास्ति किन्तु
पट इत्यत्रानुषज्यमानस्य अस्तीत्यस्य वृत्तिवबोधकत्वानुपपत्तिश्च । अनुषज्यमानपदाना-
मन्तरेणानुपपत्तिप्रतिसन्धानं पूर्वविरुद्धार्थबोधकत्वस्योत्सर्गतोऽनुभवविरुद्धत्वात् ॥

परे तु भूतले समवायेन घटो नास्तीत्यत्र नञ्सममिव्याहृतासधातोरभावोऽर्थः ।
युक्तश्चैतत् । भू सत्तायामस भुवि इत्यन्योन्याथविवासभूधातू विहितौ । तत्राभाव इत्यत्र
नञ्सममिव्याहृतभूधातोरभावार्थकतया तत्पर्यायस्य नञ्सममिव्याहृतासधातोरपि तदर्थकत्वं
वाच्यम् । अत एव भूतले घटो न भवतीत्यत्र न भवतीत्यस्य नास्तीत्यनेन विवरणं संगच्छते ।
प्रतियोगित्वमाख्यातार्थः । समवायेनेत्यत्र तृतीयान्तार्थस्तदवच्छिन्नप्रतियोगिताकत्वं
धात्वर्थान्वयि । न समवैतीत्यत्र तु समवायसंबन्धावच्छिन्नप्रतियोगिताकाभाव एव
नञ्सममिव्याहृतधातोरर्थः । अतो न काचिदनुपपत्तिरिति प्राहुः ॥

अत्र केचित् पूर्वपक्षयन्ति—एतत्कल्पेऽपि नञ्सममिव्याहार इत्यादिनियमभंगः ।
भूतले घटो नास्ति किन्तु पट इत्यत्रानुषज्यमानास्तीत्यस्य वृत्तिवबोधकत्वानुपपत्तिश्च समानः ।
अथ स्वभावतो वृत्तिवार्थकस्य नञ्सममिव्याहारदशायामभावार्थकतामापन्नस्याप्यन्यत्रानुषज्य-
मानस्य वृत्तिवार्थकत्वमुपपद्यते । स्वभावतो वृत्तिवार्थकत्वात् । अभावार्थकतातात्पर्य-
ग्राहकस्य नञः तदानीं तत्राभावात् । न च पूर्वत्रासधातोः प्रतियोगित्वार्थकतातात्पर्य-
ग्राहकस्य नञस्तदानीमभावादनुषज्यमानास्तीत्यस्य वृत्तिवबोधकत्वमस्तीति वाच्यम् । न हि
वयं तात्पर्यग्राहकसमवधानासमवधानाभ्यामस्तेरभावार्थकतां वृत्तिवार्थकतां चाचक्षाणाः परमते
तदसंभवमापादयामः ; येन तुल्यता स्यात् । किन्तु पूर्वत्रैकार्थप्रतिपादकस्यान्यत्रानुषज्य-
मानास्तीत्यस्य शक्त्या लक्षणया वान्यार्थबोधकत्वमनुभवविरुद्धमित्येव । अन्यथा गंगायां घोषः,
न मत्स्यः इत्यत्रापि स्वरसतो बोधापत्तेः । न च त्वन्मतेऽपीदं तुल्यम् । भूतले घटस्य
न भावः, किन्तु पटस्येत्यत्र नञ्विनिर्मोकेणानुषज्यमानभाव इत्यस्य स्वरसतो वृत्तिवबोधक-
त्वानुभवेन नञ्सममिव्याहारदशायामभावार्थकतामापन्नस्य नञ्विनिर्मोकेणानुषज्यमानस्य
स्वरसतो वृत्तिवबोधकत्वव्युत्पत्तेः स्वीकारात् । न च प्रतियोगित्वार्थकतामापन्नस्याप्यन्य-
त्रानुषज्जे तथा स्वीक्रियते प्रमाणाभावात् । घटस्य भूतले वर्तमानाभावप्रतियोगित्वं,
किन्तु पटस्येत्यस्य प्रमाणत्वापत्तेश्चेति चेन्न ; तथापि न वर्तत इत्यस्य वृत्तिवभावबो-
धकत्वं न स्यात् । नास्तीत्यस्य न वर्तत इत्यनेन विवरणात् ; तयोः समानार्थकत्वात् ।

तथा चानुभवविरोधः । सामान्ये समवायेन गगनं न वर्तत इत्यस्याप्रमाणतापत्तेः । इष्टा-
पत्तावर्द्धजरतीयन्याय इति ।

तदनालोचनविजृम्भितम् । यत एतन्मते नञ्समभिव्याहृतवृत्तित्वार्थकधातूनामभावार्थ-
कत्वं नञर्थभावविशेषणतापन्नवृत्तित्वार्थकत्वञ्चोभयमेव स्वीक्रियते । तात्पर्यवशाच्चैकैकबोधः ।
यत्र चैकार्थे बाधकं तत्रापरार्थमादायैव प्रामाण्यमुपपादनीयमिति न काचिदनुपपत्तिरित्यलं
विस्तरेण ॥

तथाच पाषाणनिष्ठाभावप्रतियोगी गन्धः इति बोधः । इतिपदस्य
गन्धनिष्ठपाषाणनिष्ठाभावप्रतियोगित्वमर्थः । वाच्यमित्यत्रप्यत्वेन रूपेण विधिशक्तस्य
कृतः प्रामाण्ये लक्षणा । तदन्वितनञर्थस्य वचिधात्वर्थेऽन्वयः । पुनः कृत्यत्वेन
रूपेण कृता विषयो बोद्धयते । तथाच गन्धनिष्ठपाषाणनिष्ठाभावप्रतियोगित्व-
मप्रमाणोक्तिविषयीभूतमित्यन्वयबोधः । उक्तिश्च श्रावणोपस्थितत्वात्पाषाणे
गन्धवत्त्वं नास्तीत्यानुपूर्विकैव । तत्रापीत्यादेश्च पृथिवीत्वज्ञानजन्यतद्विशेष्यकगन्धप्रकारका-
नुमितेरित्यर्थः । अपिशब्दस्वारस्यात्पाषाणे गन्धस्यालौकिकप्रत्यक्षविषयत्वं प्रतीय-
तेऽनुभवात्, तस्यापिशब्दार्थस्य तत्पदार्थेऽन्वयात् तदन्तर्भावेण तच्छब्दार्थकल्पनाद्वा
उपपादनीयम् । अनुमानादित्यत्र पञ्चम्यर्थः प्रयोज्यत्वमप्रामाण्यान्वयि । तथा
चेदं सर्वमेकं वाक्यम् । नन्वत्र गन्धनिष्ठपाषाणनिष्ठाभावप्रतियोगित्वे उद्देश्ये
अप्रमाणोक्तिविषयताविधेयकबोधो न संभवति । तादृशोद्देश्याप्रसिद्धेः । नचास्य
वाक्यस्य तदंशेऽप्रामाण्यमिष्टमेव, अभिनिवेशप्रयुक्तत्वादिति वाच्यम् । तथापीति-
पदार्थविशिष्टाप्रसिद्धेः । न ह्यसतिवस्तुनि कस्यचिद्वृत्तिः संभवति । न च इतिपदाङ्गगन्धस्य
पाषाणनिष्ठाभावप्रतियोगित्वस्य च खण्डशो भानमिति वाच्यम् । तथाप्यत्रैकवाक्यता-
बलादितिपदार्थे गन्धे पूर्वपदार्थस्य गन्धस्यान्वयो वाच्यः । स च व्यर्थः । नच पाषाण-
निष्ठाभावप्रतियोगित्वमेव इतिपदार्थः । तत्र गन्धस्याधेयतयान्वयः । तावतैव विशेष्यस्थं
विशेषणमिति वाक्यार्थोपपत्तेरिति वाच्यम् । तावतापि सर्वं ज्ञानं धर्मिण्यभ्रान्तं प्रकारे
तु विपर्यय इति न्यायेन धर्मितावच्छेदकांशे भ्रमत्वं न संभवतीतिचेत्, मैवम् । रजतत्वेन
शुक्तिज्ञानानन्तरं रजतत्वेन शुक्तिधर्मितावच्छेदकीकृत्य रजतवानयमितिवाक्यात्
भ्रमात्मकबोधस्य सर्वानुभवसिद्धतया तादृशनिश्चयासिद्धेरिति ॥

श्लोकार्थस्तु, प्यता प्यत्प्रत्ययेन । लक्ष्या लक्षणावृत्त्या बोद्ध्या, या
मानता प्रामाण्यं तस्याः भेद्यः स्वप्रतियोगिकत्वसंबन्धेन विशेष्यः नञ्

नञर्थोऽभावः । तेन युज्यते अनुयोगितासंबन्धेन विशेष्यतया अन्वीयते , या धातूक्तिः
वचिप्रतिपाद्योक्तिः । तद्भाजः तद्विशेष्यस्य । कृतः कृदर्थविषयस्य । इति-
शब्दपूर्ववाक्यात् यादृशविशेष्ये यादृशविशेषणं बोद्धव्यते तादृशविशेषणरूपोय इत्यर्थः । स
विशेष्यः इति । अत्र पाषाणनिष्ठाभावप्रतियोगित्वस्य वारद्वयं भानं त्वनुभवबलादास्थीयते ।
नास्तीत्यत्र तिङर्थस्योद्देश्यतावच्छेदकघटकतया भानमिति शब्दप्रभावकल्पितव्युत्पत्तिसंको-
चादूहनीयम् ॥ अथवा पाषाणे नास्तीति पदत्रयं तात्पर्यग्राहकम् । इतिशब्दार्थे
पाषाणनिष्ठाभावप्रतियोगित्वे गन्धस्यान्वयाद्विशिष्टलाभ इत्यादिकं स्वयमूहनीयम् ॥ ३ ॥

इतिशब्दस्य मुख्यविशेष्यार्थबोधकत्वं नेत्याशयेन पक्षान्तरमाह—

मू० आचष्टे प्राग्विशेष्यं वा तद्विशिष्टविशेषणम् ।

गन्धवत्त्वपदं गन्धनिष्ठपाषाणनिष्ठाभावप्रतियोगित्वपरम् । तत्र नच वाच्यमित्यस्या-
न्वयः । बोधाकारस्तु पूर्ववत् । पाषाणनिष्ठाभावप्रतियोगित्वस्य वारद्वयं भानादिकं तु
पूर्ववत् ॥ नन्वत्रगन्धवत्त्वपदस्य गन्धनिष्ठपाषाणनिष्ठाभावप्रतियोगित्वरूपविशिष्टार्था-
प्रसिद्धिः । न च गन्धवत्त्वपदात् गन्धस्य पाषाणनिष्ठाभावप्रतियोगित्वस्य च खण्डशो
भानमिति वाच्यम् । तर्हि गन्धवत्त्वपदात् गन्धस्य शक्त्या पाषाणनिष्ठाभावप्रतियोगित्वस्य
च लक्षणया भानोपगमस्य युगपद्वृत्तिद्वयविरोधेनासंभवादिति चेत् , न । परस्परान्वय-
बोधस्थले युगपद्वृत्तिद्वयस्याभ्युपगमात् । अयमेव वा पक्षान्तरानुसरणे बीजम् ॥

श्लोकार्थः—पूर्वविशेष्यवाचकपदं तादृशविशेष्यनिष्ठं विशेषणमाचष्टे बोधयतीति ॥

मू० विशेषणान्वितोवच्याद्यर्थस्तत्र विशेषणम् ॥ ४ ॥

पाषाणे नास्तीत्यनेन पाषाणनिष्ठाभावप्रतियोगित्वमुच्यते । प्रतिपादकत्वमिति-
शब्दार्थः । पाषाणनिष्ठाभावप्रतियोगित्वप्रतिपादकत्वमेव वा इतिशब्दार्थः । पाषाणे
नास्तीति तु तात्पर्यग्राहकम् । तथा च गन्धवत्त्वं पाषाणनिष्ठाभावप्रतियोगित्वप्रतिपादका-
प्रमाणोक्तिविषयीभूतमित्यन्वयबोधः । श्लोकार्थस्तु—विशेषणान्वितः पूर्वविशेषणान्वितः,
तत्प्रतिपादकत्वोक्तिविशेष्यकृदर्थविषयः । पूर्वविशेष्ये विशेषणमिति ॥ ४ ॥

नन्वत्र पक्षे न च पाषाणे गन्धो नास्तीति वाच्यमिति प्रयोगानुपपत्तिः । पुल्लिग-
गन्धशब्दप्रतिपाद्येऽभेदसंबन्धेनान्वितमर्थं बोधयतः विशेष्यनिष्ठस्य वाच्यपदस्य नपुंसकत्वा-
नुपपत्तेरित्यस्वरसादाह ।

न्यायकुलिशः

वादिहम्साम्बुवाहालेयश्रीरामानुजार्यविरचितः

Edited with Introduction and Notes

BY

R. RAMANUJACHARI,

AND

K. SRINIVASACHARI,

यस्मादस्माभिरेतद्यतिपतिकथितप्राक्तनप्रक्रियोद्य-
त्कर्मब्रह्मावमर्शप्रभवबहुफलं सार्थमग्राहि शास्त्रम् ।
तं विष्वग्भेदविद्यास्थितिपदविषयस्थेयभूतं प्रभूतं
वन्देयत्रेयरामानुजगुरुमनघं वादिहंसाम्बुवाहम् ॥^१

भगवद्भाष्यकारश्रीसूक्तिजातजयध्वजम् ।
अत्यद्भुततमन्यायकुलिशाख्यप्रबन्धदम् ॥
अत्रिगोत्रप्रदीपश्रीपद्मनाभार्यनन्दनम् ।
प्रपद्ये परया भक्त्या रामानुजगुरुत्तमम् ॥^२

१. निगमान्तमहादेशिकानुगृहीतोऽयं श्लोकः ॥

२. रङ्गरामानुजस्यमिविरचितमिदं पद्यद्वयम् ॥

॥ श्रीः ॥

श्रीमते रामानुजाय नमः

न्यायकुलिशे

प्रथमो वादः

अभेद्यं सर्वेषां हतकुमतिगोत्रप्रसरणं
यतीन्द्रादेशैकप्रवणसुमनस्त्राणनिपुणम् ।
कठोरेष्वात्रेयान्वयतिलकरामानुजकृतं
कथायुद्धेष्वाविष्कुरुत निशितं न्यायकुलिशम् ॥
सिद्धे वेदान्तवाक्यानां प्रामाण्यस्य प्रसिद्धये ।
व्युत्पत्तिरपि तत्रास्ति शब्दानामिति वर्ण्यते ॥

तत्र केचिदाहुः—

नैकैकश्येन शब्देषु व्युत्पादोऽङ्गुलिमुद्रया ।
असिद्धेर्बोधकत्वस्य नचैवं ह्यन्विताभिधा ॥

वृद्धव्यवहारमन्तरेण वाक्यस्य बोधकत्वशक्त्यवधारणानुपपत्तेर्व्यवहारस्यच
कार्यबुद्धिः.....[पूर्वकत्वेन कार्यरूप एवार्थः । न च पित्रादिभिर्वाला अङ्गुल्या शब्दा]
निर्दिश्य व्युत्पाद्यन्त इति युक्तम् । तन्निर्देशे तच्छ्रवणमात्रमेव श्रोतुः नार्थः.....
[प्रतिपत्तिः । तन्निर्देशाभावात् । निर्दे] श्रेयर्थे निर्दिश्यमाने बुद्धिः स्यात् ।^१
न तस्याः शब्दकारणकत्वे प्रमाणमस्ति । प्रत्युत निर्देशस्यैवार्थप्रतीतिहेतुत्वाच्छब्दस्या
तत्परत्वनिश्चय एव स्या.....न.....[त् । नह्येकस्मा]त् प्रतिपन्ने वस्तुनि प्रत्यर्थ
(प्रत्ययार्थ ?) मुपायान्तरार्थनमवकल्पते ।^२ अनुग्राहकत्वंतु केवलायां चेष्टायां

१. निर्दिश्यमानार्थविषयकज्ञानमात्रमेव स्यादित्यर्थः ।

२. इदमत्र प्रघट्टकनिष्कृष्टतात्पर्यम्—अङ्गुलिनिर्देशपूर्वकव्युत्पत्तिस्थले अङ्गुलिनिर्देशः
अर्थः, शब्दश्चेति त्रयमस्ति । तत्र निर्देशस्य बोधकत्वं अर्थस्य बोध्यत्वं च वादिद्वयसंप्रतिपक्षम् ।
शब्द एकः परिशिष्यते । सचार्थवद्बोध्योवा निर्देशवद्बोधकोवेति विशये बोध्यत्वमेव संभवति न
बोधकत्वमिति पूर्वपक्षी । बोधकत्वएव प्रयोजनादिसंभवात्तदेवाश्रयणीयमिति सिद्धान्ती । इति ।

बोधकत्वदर्शनात् त्वयाप्यनभ्युपगमाच्च नाशङ्कनीयमेव । अतएव हि सहप्रयोगादपर्या-
यत्वविवेकः । अतएव हि साहित्यविवक्षापि निरस्ता । सा त्वङ्गुलिनिर्देशगोचरता-
मेव शब्दस्यावहेत् । यदभिमुखो निर्देशस्ततोऽन्यत्र शब्द इति चेत्तदपि शब्दस्य
बोधकत्वे विरुद्धं न बोध्यत्वे । बोध्यासङ्गतस्य बोधकत्वानुपपत्तेः । देशतस्साहित्या-
भावेऽपि कालतस्साहित्यादेवान्यस्योपपत्तेः । कदाचित् केवलाङ्गुलिनिर्देशोऽर्थमात्र
इति चेत्किमनेन । न हि प्रत्यक्षवदनुमानस्य वर्तमानविषयत्वनियमः । पराभिप्राय-
गोचरतापूर्वमेव चेष्टानुमानं सर्वत्र प्रवर्तत इति तदात्वेन शब्दोऽवगन्तव्य इति किमुप-
पद्यते ।^१ भज्यतां वा कथंचिद्गोचरत्वम् ।^२ उपायत्वंतु ना.....[शङ्का] मप्यधिरो-
हति । उपायत्वंतु (तत्तु ?) शब्दस्य चेष्टासाहचर्यात्संभवदपि तद्वत्स्यात् । ततश्च
सङ्केताधीनमिति शब्दस्याप्यनुमानान्तर्भावः । हस्तचेष्टायावा शब्दवत्प्रमाणान्तरत्वम् ।
उभयोरेववा समानजातीयत्वेन प्रमाणत्वम् । किञ्च, अयं प्रत्येकपदव्युत्पादन-
प्रयासोऽन्विताभिधानवादप्रतिभट्टइति भवद्विरतीव परिहरणीयः । तथा हि—
एकस्यान्वितार्थप्रतिपत्तिहेतुभावोऽशक्यत्वादनुपपन्नः । स्वार्थमात्रप्रतिपत्तिर्जाताऽपि स्मृति-
राभिधानिकीवा । नतावत्स्मृतिः तत्र व्युत्पत्त्यनपेक्षत्वात् । नहि *समादिष्वेकै-
कदर्शनादितरत्र जायमाना स्मृतिर्वाच्यवाचकसम्बन्धज्ञानमपेक्षते । न च साहित्यमात्र-
मेवासौ ।^३ बोध्यबोधक.....[मात्रा] साधारण्यात् । नाप्याभिधानिकी । प्रत्येकपदार्थ-
मात्रगोचराभिधानानभ्युपगमात् । अभ्युपगमे वाभिहितान्वयप्रसङ्गात् । न च प्रथमा-
भिधाने.....[अर्थमात्रबुद्धिः, द्वितीयाभिधाने पुनरप्यन्वितार्थगोचरत्वमिति वाच्यम् ।
अभिधानावृत्त्ययोगात् । ननु वाक्येऽन्विताभिधानसिद्धिः इहतु (न तु ?)
पदमात्रे, उभयसमभिव्याहारे कः पदार्थ इति †विशेषणन्याय (विवेचने ?) बला-
दन्विताभिधानमभ्युपगम्यत इति चेत्तथापि स्वार्थमात्राभिधानभङ्गाभावे तदनुपपत्तिः ।
तद्वङ्गेच तुल्यन्यायेन सिद्धार्थतापि भज्येतैव । अथ सिद्धपरे वाक्यान्तरे अन्विताभिधान-

१. इत्येतत्किमुपपद्यत इत्यर्थः ।

२. बोध्यत्वमित्यर्थः ।

३. उपायत्वंतु—बोधकत्वं तु ।

* सदशादृष्टचिन्ताद्याः स्मृतिबीजस्यहेतव इत्युक्तेरितिभावः. आद्यपदेन संबन्धिपरि-
ग्रहः, स्मृतिबीजपदं संस्कारवाचि ।

४. वाच्यवाचकसम्बन्धः ।

† न्यायोऽत्र पदान्तरसमभिव्याहारसप्रयोजनत्वादिरूपः ।

व्युत्पत्तिः, पुत्रस्ते जात इत्यादौ हि तथा दृश्यत इति मतम् । तथा सति हि तदेव वाच्यम् । तदुपेक्ष्य यत्प्रत्येकपदव्युत्पत्त्यभिधानं तदन्विताभिधानसिद्धान्ता-
सङ्गताभिधानमिति । अत्र ब्रूमः—

स्मृत्याकारं तु यदज्ञानं प्रत्येकपदगोचरे ।

तदुदाह्रियते तेषां संसर्गज्ञानकारणम् ॥

नहि वयमेकपदार्थमात्रगोचरं ज्ञानमाभिधानिकमुपेक्ष्य (उपेत्य ?) तत्रैव संबन्धग्रहं व्युत्पादयामः । अपि त्वर्थस्मृतिरूपमेवाभ्युपेत्य तत्समुच्चयेऽन्विताभिधानं दृष्ट्वा तद्वारेण सिद्धे संबन्धावधारणम् । व्युत्पादकोऽस्यायं पिता अयं मातुलः इयमम्बेति शब्दानङ्गुलिनिर्देशपूर्वमभिधत्ते । तत्र श्रोता हस्तचेष्टाभिज्ञानादङ्गुलिनिर्देशोऽर्थगोचर इति कृतनिश्चयस्तदुभयसाहित्यविवक्षासनाथं शब्दमपि कथमपि (मिति ?) चिन्तयति ।

तल तावन्न शब्दोऽयं बोध्यत्वेन विवक्ष्यते ।

बोधकत्वविवक्षा हि भवेद्बुद्धयर्थवत्त्वतः ॥

स्वयमपि हि बालः प्रयोजनालोचनेन सर्वदा प्रयतमानो व्युत्पादकस्यासस्यापि चेष्टाशब्दसाहित्यप्रयोगं विवक्षितं प्रयोजनवत्तया सकलस्य (सङ्कलय्य ?) शब्दस्य बोध्यत्वे तदपश्यन्नर्थमेव केवलं बोध्यं मन्यते । अतो बोधकत्वेनैव शब्दस्य साहित्यविवक्षा । यत्तु बुद्धे बोधानर्थवयमिति तदपि पर्यायस्येव व्युत्पादनाय बोधकान्तरस्य प्रयोग इति प्रत्युक्तम् ।

न च प्रयोजनाभावाद्बोध्यत्वमविवक्षितम् ।

पुनःस्थापयितुं शक्तः प्रयोगस्सहकल्पितः ॥

अर्थस्यैव यदि हानादिप्रयोजनसंभावनया ज्ञापनमभिसंहितं एवं तर्हि व्यवहारापेक्षया-
र्थस्य शब्दस्य [कार्यपरत्वं] प्रसक्तमिति चेन्नै । कार्यस्यात्र—

बोधकेनानुपस्थानात्सिद्धालम्बनवि……[वर्ण] नात् ।

तदज्ञानस्य फलत्वन्यदर्थालम्बनताकृतम् ॥

१. घटादिरूपार्थस्य हानोपादानादिक्रियासापेक्षतया तदन्वयोऽवर्जनीय इति तादृश-
कार्यान्वितार्थपरत्वं घटादिशब्दस्य प्रसज्यत इत्यर्थः ।

२. शब्दस्य घटादिरूपसिद्धार्थविषयकत्ववर्णनेन बोधकेन घटादिपदेन कार्यस्योपस्थि-
त्यनङ्गीकारेण न कार्यपरत्वप्रसक्तिः । अर्थस्य कार्यसापेक्षस्य विषयताकृते कार्यान्वयसाक्षात्कार-
ज्ञानस्य तत्तत्कार्यविशेषान्वयसङ्गावज्ञानरूपं फलं भवतीति तु अन्यदित्यर्थः ।

मा वा हानादिहेतुत्व (योगित्व ?) मर्थस्य प्रतिसंहितम् ।
तैस्मिन्संसर्गविज्ञानं प्रयोजनमिहोच्यते ॥

अयं तातः अयं मातुल इत्यादिप्रयोगेषु साहित्यदर्शनमूलस्मृतिपथविपरिवर्ति-
तातमातुलायंशब्दतदर्थतद्गोचरचेष्टस्य व्युत्पाद्यमानस्य तातशब्दतदर्थव्यावृत्तावप्यनु-
वर्तमानायंशब्दतदर्थप्रतिबंधानवतस्तातायंशब्दयोरन्वयमर्थादनुपलभमानस्य तदर्थयोश्च
शब्दात्सामानाधिकरण्येनान्वयमुपलभमानस्यार्थस्य ज्ञाप्यत्वेनान्वयफल (ज्ञाप्यत्वेऽन्वय ?)
ज्ञानदर्शनाच्छब्दस्य तदभावात्तदेवान्वयज्ञानं फलमिति किन्नोपपद्यते ।^१

अतस्तदेव साफल्याद्गोध्योऽर्थ इति निश्चयः ।

वैचकप्रत्ययश्चात्र संसर्गज्ञानजन्मना ॥

ननु संसर्गविज्ञाने सिद्धे साफल्य (वाचित्व ?) कल्पना ।

तच्च साफल्य (संसर्ग ?) विज्ञानं वाच्यवाचकभावतः ॥

दैत्तोत्तरमेतत् । तथाहि—

साहित्यदृष्टिमात्रोत्थवाच्यस्मृतिसहायवान् ।

एकशब्दान्तरस्मार्थसंसृष्टस्वार्थं वाचकः ॥

१. तस्मिन्—अर्थे, संसर्गः—अन्वयः ।

२. अर्थयोरन्वयज्ञानरूपं फलमुपपादयति अयमित्यादिना । अनुपलभमानस्योपल-
भमानस्य च व्युत्पाद्यमानस्य बालस्य अर्थस्य ज्ञाप्यत्वेऽन्वयज्ञानदर्शनात् शब्दस्य ज्ञाप्यत्वे
तददर्शनाच्च तदेवाऽन्वयज्ञानं फलमित्यङ्गीकार्यमिति किन्नोपपद्यत इत्यन्वयः । तथा च शब्दस्य
ज्ञापकत्वं एव एतादृशप्रयोजनसंभवात् तदेवाङ्गीकार्यं न ज्ञाप्यत्वं प्रयोजनाभावादिति भावः ।
तदेवाह अत इति ॥

३. संसर्गज्ञानरूपप्रयोजनसंज्ञावाचीनो वाचकत्वप्रत्ययशब्दस्येत्यर्थः ।

४. प्रथमव्युत्पत्तिस्थले पदमात्रस्यापि वाचकभावोऽस्तीति मन्वानोऽन्योन्याश्रय-
माशङ्कते नन्वित्यादिना ।

५. अस्याशङ्कायाः पूर्वमेव “अपि तु स्मृतिरूपमेवाभ्युपेत्य” इत्यादिना परिहृतत्व-
मभिप्रेत्याह दत्तोत्तरमिति । तत्र स्थले प्रत्येकं पदानां स्मारकत्वमेव न वाचकत्वं पदान्तरसम-
भिध्याहारदशायामेव तत्तत्पदेन तत्तदर्थस्मृतौ सत्यामेकैकपदस्य पदान्तरस्मार्थविशिष्टस्वस्मा-
र्थपरत्वरूपं विशिष्टार्थवाचकत्वमिति ।

एवं तर्ह्यव्युत्पन्नानां शब्दानां वाक्यार्थप्रत्ययायकत्वप्रसङ्ग इति चेत्स्यादेवं यदि तेषां स्वार्थस्मृतिजनकतापि स्यात् । तदा स्मार्थस्मारकत्वलक्षणसंबन्धज्ञानं हि सहकारि निश्चिनुमः । स्मारकाणां तु सहकार्यभावादवाचकत्वम् । हेत्वन्तरेणार्थे स्मृतेऽपि स्वापादितार्थस्मृतिसहायानामेव शब्दानां वाचकत्वमित्यनतिप्रसङ्गः । अतोऽङ्गुलिनिर्देशाद्व्युत्पादयन्तोऽपि न तदानीमेव वाचकत्वबुद्धिमुपजनयन्ति । किन्तु साहित्यप्रयोगमात्रेण स्मारकत्वमादधति । तच्च स्मृतिद्वारा प्राप्तसंसर्गज्ञानकालभावि-संज्ञासंज्ञिसंबन्धज्ञानाभिप्रायेणेति विवेक्तव्यम् । अत एतदभिप्रायज्ञानपूर्वकं वा बालानां व्युत्पत्तिः अन्यथा वा । प्रत्येकपदस्मारितपदार्थसंसर्गज्ञाने पदानां कारणत्वदर्शनादेव ह्येषां व्युत्पत्तिः । अतोऽपवादशङ्कानिरासायैव व्युत्पादकपक्षे शब्दसाहित्यनियमस्य प्रयोजनपर्यवसानवर्णनमिति । यद्येवं वाचकत्वग्रहणनिरपेक्षमेव शब्दस्य कथंचित्स्वार्थ-स्मृतिसाधकत्व (स्मृत्याधायकत्व ?) ग्रहणमात्रेणाभिधायकत्वं सिध्यतीति मीमांसासूत्र-विरुद्धमिदमापद्यते । उच्यते—

वाच्यवाचकसंबन्धः प्रथमं * यत्र गम्यते ।

स्वार्थग्रहणसिद्ध्यर्थं तत्रेदमभिधीयते ॥

अत एव ह्यविज्ञातवाच्यवाचकशक्तिषु ।

सिद्धान्तान्तरनिष्ठेषु शब्दानां स्यात्प्रधान (प्रमाण ?) ता ॥

अन्यथा तेषामगृहीतस्वाभाविकसंबन्धानां बोध (अबोध ?) काश्शब्दा भवेयुः । न च वयमपि व्यवहारेण व्युत्पत्तिं न मृष्यामहे । यतः प्रथममेवाभिधायकत्वानु.....[प] गमः । अभिहितान्वयसिद्धान्ताश्रयणेन वा प्रथमस्मृतिमेवाभिधानमुपेत्य तद्भाषणमिति । यद्वा—

किं वापभ्रंशलिङ्गादिसाधारण्येन बोधनम् ।

पश्चाद्विशेष्यमाणं सदभिधानत्वमृच्छति ॥

यच्च बोधनमेवादौ संबन्धः फलमित्यपि ।

संबन्धान्तरसापेक्षं लिङ्गाद्यस्माद्व्युदस्यति ॥^१

न हि बोध्यबोधकभाव एव सामान्यविशेषात्मना भिद्यमानोऽपि व्याप्त्यादि-संबन्धान्तरभावमनुभवतीति ।

* यत्न—बुद्धव्यवहाराद्व्युत्पत्तिस्थले.

१. बोधनं कर्तुं संबन्धान्तरसापेक्षं लिङ्गादिकं भस्मात्—शब्दप्रमाणात् व्यावर्तयति ।

अस्तु तावदेवं सिद्धे व्युत्पत्तिः । कार्येऽपि व्युत्पत्तिर्दुरपह्वा । अतश्शेषपूरणेन कार्यान्वितस्वार्थपरतैव शब्दस्य फलिप्यतीति चेन्नैतदेवम् । यतः—

अर्थानां व्यभिचारित्वादवाच्यत्वं प्रतीयते ।

न तु संसर्गमात्रेण वाच्यता प्रतिपाद्यते ॥

अस्तुवा कार्यस्य सर्वत्राव्यभिचारः । दृष्टोदाहारणमात्रेषु ह्यव्यभिचारो वर्णनीयः नतु प्रयोक्ष्यमाणेषु । शब्दशक्तिनिश्चयानुसारेण यथारुचि प्रयोगानुपपत्तेः (प्रयोगोपपत्तेः ?) । तन्निश्चयश्च न प्रतियोगिगोचरः स्वार्थस्यैव विशिष्टस्याभिधेयत्वात् । प्रतिसंबन्धिनस्तु पदान्तरस्मारितस्य अनेनाभिधानानभ्युपगमात् । अभ्युपगमेवा पर्यायत्वप्रसंगात् ।—

यस्य ह्युपाधिशब्दे....[न ना]भिधेयं विशेषणम् ।

कथं तर्ह्यभिधेय....[न्त]दभिधानान्तरास्पदम् ॥

न चाव्यभिचारित्वात् वाच्यत्वं । घटादिशब्दस्य सत्तादिवा....[चकत्वप्रसङ्गात्] । प्राधान्यमपि वाक्यार्थ....[रूपतामेव संपा]दयति नाभिधेयताम् । अप्रधानानामप्यभिधेय-त्वाभ्युपगमात् । अतश्शुक्लः पटो भवतीत्येवमादेः कार्यान्वितस्वार्थाभिधाने न किञ्चिन्निबन्धनमस्ति ।

यत्तु शब्दचेष्टयोस्समानयोगक्षेमत्वादेकजातीयप्रमाणत्वप्रसङ्ग इति । तत्र वदामः—

बोधकत्वं विना शब्दे नास्ति संबन्धकरूपना ।

भावभेदप्रयुक्ता तु चेष्टा तस्यानुमापिका ॥

किञ्च—

संहत्यैव प्रमाणत्वं शब्दस्यान्वयबोधनात् ।

पुंसां चेष्टा पुनर्व्यस्ता विशिष्टमनुमापयेत् ॥

औत्मनि विशिष्टबुद्धिं दृष्ट्वा प्रत्येकं व्युत्पादितानां प्रयोज्यबुद्धिज्ञानोत्पत्तिमनुमाय व्यवहारेवा संबन्धावधारणमिति न कचिदपि बोध्यबोधकभावातिरिक्तसंबन्धान्तरसिद्धि-

इशब्दार्थयोरित्यनुमानवैधर्म्यमत्यन्तप्रसिद्धमेव । चेष्टा पुनश्चेष्टमानपुरुषविज्ञानहेतुरनुमानमेवेत्यवसीयते । तथाहि—

काश्चिद्भावविशेषस्य कार्यत्वेनैव संस्थिताः ।

सङ्केतसिद्धिकार्यार्थाः काश्चिच्चेत्यनुमापिकाः ॥

ननु च शब्दवत्प्रयोजकवृद्धसमचेष्टतश्चेष्टा (समवेतचेष्टा ?) समष्टिप्रेरितप्रयोज्य-
वृद्धप्रवृत्तिदर्शनाद्विशिष्टज्ञानानुमानपूर्वकं व्युत्पत्तिस्स्याच्चेत् (स्यादितिचेत् ?) ।^१

स्यादेवं यदि तत्पूर्वं चेष्टाव्युत्पत्तिरिष्यते ।

कचित्प्रागनुमानत्वे सिद्धे तत्रापि सा गतिः ॥

न चैवं सङ्केतितडित्थादिशब्दानामन्येषांवा व्यस्तानां प्रथमं संबन्धग्रहणोपपत्तिः । यद्यपि पदार्थानां प्रत्येकप्रमाणप्रतिपन्नानां पारिशेष्यलिङ्गानवगतसाहित्यानां स्वसंसर्गप्रतिपादनासामर्थ्यनिश्चयः । शब्दवद्भावं संसर्गगोचरतया चेष्टानां न व्युत्पत्तिः । तथापि पक्षधर्मतावशेन विशिष्टज्ञानमिति विवेक्तव्यम् । प्रत्येकं हि चेष्टास्वात्मदृष्टव्यासिवलाः परत्रापि तत्तद्बुद्धिसिद्धः...[स्वरूपा] स्तामेव विशेषतोऽनुमापयन्ति । स्वयं हि कस्यचिदानयनार्थमाकुञ्चनं करोति । निरसनाय प्रसारणं, अभ्यनुज्ञानार्थं मुखं प्रयच्छति, विवादे स्वाभिमुख्यं निर्वर्तयन् तिर्यक् प्रेरयति । एवमादि तत्तत्कर्म तत्तदभिप्रायपूर्वकमिति व्याप्तं विशेषाभिमुख्येन पक्षधर्मतालाभात्तद्विशेषगोचरतया चेष्टायां चेष्टान्तरनिरपेक्षमनुमानत्वं सिध्यति । नैवं शब्दस्य कस्यचिच्छब्दान्तरनिरपेक्षस्य विशिष्टगोचरतयानुमानत्वमवकल्पते ।

१. बहुव्रीहिरयम् । भावभेदप्रयुक्तैत्यंशस्य विवरणम् ।

२. अयं भावः । यथा गामानयेति प्रयोजकेनोक्तौ प्रयोज्ये विशिष्टज्ञानं तद्वाक्यजन्यं तदीयप्रवृत्त्या अनुमाय तद्वाक्यस्य विशिष्टार्थबोधकत्वं व्युत्पत्सुः प्रयेति, एवं शब्दोच्चारणं विना गवानयनरूपार्थज्ञापकानेकहस्तचेष्टामात्रसद्भावस्थले पूर्ववत् व्युत्पत्सोः प्रयोज्यवृद्धगतप्रवृत्त्या प्रयोजकगतचेष्टासमुदायजन्यविशिष्टज्ञानानुमानसंभवेन चेष्टानामपि तादृशविशिष्टार्थबोधकत्वं संभवतीति शब्दवत्प्रमाणत्वमिति नानुमानत्वसंभवस्तासामिति ।

३. तत्पूर्व-हृदप्रथममित्यर्थः । अयं भावः—अन्यत्र एकस्या अपि चेष्टायाः भावभेदप्रयोज्यत्वेन तदनुमापकतया अनुमानत्वे सिद्धे तदनुरोधेनोक्तानेकचेष्टास्थलेऽपि तासामनुमानत्वमेव युक्तम् । बोध्यबोधकभावातिरिक्तेन कार्यकारणभावसंबन्धेन ज्ञानसाधनत्वाच्च । शब्दविषये तु नैवमनुमानत्वं शक्यं वक्तुम् तस्य प्रत्येकं विशिष्टज्ञापकत्वानङ्गीकारात् । कार्यकारणभावादिसंबन्धान्तरपरिहारेण वाक्यवाचकभावसंबन्धेनैव ज्ञानजनकत्वाच्चेति ।

न च चेष्टान्तरत्वं स्यादभिमुख्याहिसङ्गते । (आभिमुख्याभिसङ्गतेः ?) ।
एकस्या एव यद्रूपमाभिमुख्याद्विना न तत् ॥

याश्च स्थूलकृशवृत्तचतुरश्रह्रस्वदीर्घादिप्रभेदवस्तुज्ञापनाय प्रवृत्ताश्चेष्टाः ताश्च
तत्तद्वस्तुस्थितियोग्याकाशप्रदेशपरिच्छेदाकारेण तत्तद्बुद्धिमुत्पादयन्तीति नात्रापि शतघन्तर-
कल्पनावकाशः ।

तत्तद्वस्त्वात्मनात्मानमात्मीयं वापि किञ्चन ।
भावयन्ति क्वचित्त्र नातिक्लेशो भविष्यति ॥

यत्र वा कश्चित्सर्वप्रकारस्संबन्धो न दृश्यते तत्र शुद्धज्ञापकप्रतिरूपकल्पना
मूलमिति विवेक्तव्यम् । अत एव लिपेरक्षरप्रतिपत्तिर्व्याख्याता । तत्र च

सङ्केतमात्रसिद्धैव व्याप्यव्यापककल्पना ।
आनन्तर्यविशेषेण पक्षधर्मत्वसंभवः ॥

अत एव हि तत्र प्रत्येकमेव संबन्धग्रहणान्न समुदायापेक्षा । शक्यते हि केनचि-
त्प्रकारेण किञ्चित्कस्यचिद्व्यापकमिति सिद्धे पुरुषेणापि तत्प्रकारस्यापरत्र व्यवहारार्थमा-
रोपणम् । तदभिप्रायानुसारिभिश्चापरैर्व्यवहारः प्रतीयते । यद्यपि तस्याभिप्रायमपि
चिरनिर्वृत्त संबन्धमूलतया नोपदिशन्ति तथापि तद्गोचरमात्रोपदेशाद्व्यवहारस्संपद्यते ।
एवमेव भाषान्तराणामपि व्यवहारः । तत्र तु—

अनुमानप्रकारस्तु लिप्यादौ परिकल्प्यते ।
भाषान्तरे पुनः कल्प्या भवेच्छब्दप्रमाणता ॥

न हि तत्र प्रत्येकस्यैव पदस्यार्थप्रतिबोधनमुपलभ्यते । पक्षधर्मतालभ्यविशेषा-
भावात्पूर्वानुभूतस्मृतिमात्रे चाननुमानत्वात् साक्षात्प्रमाणीभूतशब्दप्रकारेण बोधकत्वदर्शनाच्च ।

शब्दः खलु विशिष्टार्थं संसृष्टः प्रतिपादयन् ।

अन्वयव्यतिरेकाभ्यामंशे निष्कर्षमृच्छति ॥^१

तथा गृहीतसंबन्धः परस्ताद्व्यवहारकृत् ।

व्याप्यत्वपक्षधर्मत्वमाना (पक्षधर्मत्वाभावा ?) द्वित्रोनुमानतः ॥^२

१. इदं गामान्येत्यादिव्यवहारपूर्वकव्युत्पत्त्यभिप्रायम् ।

२. इदं यमतएव अभ्यातातमातुलादिशब्दव्युत्पत्त्यभिप्रायम् ।

स हि न तावद्वाक्यात्मना अनुमानम् । वाक्यार्थव्याप्त्यभावात् । तस्य च न वाक्यार्थसमानाधिकरणतया पक्षधर्मत्वप्रतिपत्तिसंभवः । नापि पदात्मना । तस्यापि पदार्थेन संबन्धान्तरादर्शनात् । ज्ञाप्यज्ञापनसंबन्धस्य व्याप्तिफलत्वात्तदनन्तरभावित्वेन तस्यैव तद्भावानुपपत्तेः । न च पदमात्रस्यानुमात्वमनधिकविषयत्वादित्युक्तम् । नापि पदान्तरसंसृष्टवेपेणानुमानत्वम् । अवाक्यत्वात् । नापि वाक्यस्थानां पदानां संसर्गविशेष-बोधकतयानुमानत्वम् । परस्परसमभिव्याहारानुग्रहापेक्षत्वादभिधानस्यानुमानेऽनुमाना-न्तरानपेक्षत्वात् । अतो विलक्षणेनैव रूपेण शब्दस्य बोधकत्वम् । तच्च रूपं स्वाभाविक-शक्तिशालिषु केषुचित् स्वतस्सिद्धम् । अन्येष्वारोपितं व्यवहाराय घटिष्यते

नै तावत्सर्वशब्देन स्वतश्शब्दः प्रतीयते ।
अन्यथासिद्धिदोषेण कचिद्येन न कल्प्यते ॥
तथा यः कश्चिदेकस्य संज्ञेति परिभाष्यते ।

न खल्वनिदं प्रथमव्यवहारहेतुभावेषु सङ्केतकरणसंभावनावकाशः । ते च के शब्दा इति चिन्तायामुच्यते ।

येषां स्मृतिप्रवाहेण परिपालितवर्ष्मणाम् ।
योग्यापि नेष्यते सृष्टिः (योग्योऽपि नेक्ष्यते सृष्टा ?) तेषामेव ह्यनादिता ॥^२
ननु पालनभिन्नत्वादस्मृतिः कर्तुरुच्यते ।
न चानपेक्षितस्मर्तुं यद्येषामेष विद्यते ॥
(न हि पालनहीनत्वादस्मृतिः कर्तुरुच्यते ।
न चानपेक्षितः कर्ता यद्येषामेष विद्यते ? ॥)

१. न तावत्सर्वशब्देषु शक्तिः साङ्केतिकी भवेत् ।

रूपाधेरपरिज्ञानास्त्वतश्शक्तिः प्रतीयते ॥ इति स्यादिति केचित् । प्रकरणमिदं सर्वेषामपि शब्दानां पुरुषसङ्केतरूपैव शक्तिः न कश्चित्स्वतस्सिद्धा इति वदन्तं तात्किंकप्रति प्रवृत्तमिति ज्ञेयम् ॥

२. येषां शब्दानां स्मृतिप्रवाहेणास्खालित्वेन रक्षणमुपलभ्यतेऽवश्यापेक्षितश्च कर्ता भवति, परन्तु स न विज्ञायते तेषां शब्दानां कर्तुरभावादेवाविज्ञानमिस्थाश्रयणीयमिति नित्यत्व-सिद्धिः । येषां पुनः तथाविधपरिरक्षणाभावः कर्तुरनपेक्षावा तेषां कर्तृत्वमेव तदविज्ञानं तयोरन्य-तरेणैवोपपन्नमिति सकर्तृकत्वाविरोधादनित्यत्वमिति प्रबह्वृत्तार्थः ।

संबन्धे तदनि....[त्यत्वात्प्रयोक्तुः] स्यादपेक्षणम् ।
सन्दर्भे वानपेक्षायां संबन्धे ध्रुवमर्दनम् ॥

तथाहि एके तावत् भाषाशब्दसमभिव्याहारेणार्थं बुभुत्समानाः पुरुषाधीनप्रयोगेषु....
[पदेषुश]क्तिसद्भावतत्समारोपणयोः कामकृतादरास्तत्समुदायरूपवाक्यप्रयोक्तुः पुरुषस्य
प्रत्ययितव्यत्वमेव केवलमनुसृत्य तदधीनार्थनिश्चयलाभाद्व्यवहारफलं लभन्ताम् ।

यत्र तु न पुरुषाधीनता वाक्यप्रयोगस्य विज्ञायते । तत्र चेत्पदेषु न स्वाभाविक-
वाचकशक्तिः, (अपितु) पुरुषसङ्केतमात्रादेव बोधकता । तदा पुरुषा (पुरुषो ?) नपेक्षन्त्य-
वाक्यानुकूल्येनवा पदेषु बोधकत्वं समकल्पयत् उत स्वातन्त्र्येणेति विवेकाभावे
कथमिव तद्वाक्यार्थस्य निश्शङ्कमशेषपरीक्षकोपादानमित्यवश्यविज्ञेयता सङ्केतकर्तुः ।
तस्य हि प्रमाणान्तरेण तद्वाक्यार्थमनुसन्धाय तदेकदेशभूतपदार्थेषु तद्वाक्यैकदेशानां
पदानां बोधकत्वं व्यवस्थापयतः किञ्चिन्मात्रान्यथाभावेऽपि विशिष्टवाक्यार्थसिद्धेरतिवादा-
नुविधेय (सिद्धिरिति नानुविधेय ?) प्रज्ञत्वं विज्ञायते ॥

अतो वाक्यप्रयोक्तुर्वा सङ्केतयितुं वा ।
सद्भावे तदविज्ञातुर्वाक्यार्थे निश्चयः कथम् ॥
महर्षयश्च धर्मिष्ठाः कृतज्ञाः सत्यवादिनः ।
पतञ्जलिमुखास्सन्तः निषेधन्तीति (निषेधन्त्यति ?) साहसम् ॥
शब्दार्थव्यवहारश्च कश्चिद्यत्रानुवर्तते ।
प्रक्रियान्तरमाश्रित्य तदान्यकरणं भवेत् ॥
यदातु सर्व एवायं व्यवहारो न दृश्यते ।
तदा केन प्रकारेण सङ्केतकरणं भवेत् ॥
स्मृत्याधायकमात्रस्य ह्यन्विताविबोधिता ।
न च शब्दादृते कापि दृष्टपूर्वा कथञ्चन ॥
फलशब्दं च नाज्ञात्वा (मूलशब्दमविज्ञाय ?) सङ्केतं कः प्रकल्पयेत् ।
नाचाकृत्यैव सङ्केतं फैलवत्तां सहिष्यते (भजिष्यते ?) ॥

१. संबन्धे तदन्वित्यत्वे संबन्धुस्यादपेक्षणम् ।

सन्दर्भे वानपेक्षायां संबन्धुर्ध्रुवमर्दनम् ॥

इति भवितव्यमिति केचित् ।

२. फलमत्रान्वितार्थाभिधायित्वरूपं बोधकत्वम् ।

न च स्मृतिसमर्थत्वसिद्धयै सङ्केतकल्पना ।
येन केनापि योगेन तत्सामर्थ्यस्य दर्शनात् ॥
नचास्मारकमादाय कश्चित्संव्यवहारयेत् ।
अर्थेनापि तथात्वेन व्यवहारप्रसङ्गतः ॥

अतो विश्वशब्दव्यवहारमङ्गलाशून्ये जगति अर्वाचीनेन तावच्छब्दप्रमाणप्रथम-
प्रवृत्त्यर्थसङ्केतकल्पनानवकाशः । ईश्वरस्तु वेदवच्छब्दव्यवहारमपि यथापूर्वमकल्पयदिति
न्यायेन स्वातन्त्र्येण प्रवर्तयति ।

स हि शक्त्यनुसारेण तेषामेव प्रवर्तयन् ।
नासमर्थपदारूपास्वातन्त्र्यमधिगच्छति ॥
यथान्यः पुरुषः कर्ता योग्यादृष्टेर्निवारितः ।
तथा वारितमीशस्याप्ययथापूर्वकल्पनम् ॥
वर्णानां शक्तियुक्तानां क्रमानुग्रहकांक्षिणाम् ।
नित्यः क्रमविशेषोऽपि व्यञ्जको व्यवतिष्ठते ।
तस्य येत्वन्यथाभावं कुर्युर्भाषान्तरादिषु ।
प्रकृतिप्रत्ययान्यत्वपरिभाषादिहेतुभिः ॥
तत्रापि पुरुषाधीनं प्रमाणान्तरकारितम् ।
याथात्म्य (याथार्थ्य ?)मिति विज्ञेयमाभासत्वे (त्वं ?) स्वरूपतः ॥
न ह्याभासस्य प्रतीतिहेतुत्वमेव निवर्तते । किन्तु प्रमितिहेतुत्वमेव ।
अज्ञानकरणे (कारणा ?) तत्त्वमारोपितमकार्यकृत् ।
तज्ज्ञाने कारणे (तज्ज्ञानकारण ?) भ्रान्तिः कार्यं सूते भ्रमान्तरम् ॥^१
प्रतिबद्धभ्रमेणैव प्रतिबन्धकवेदनम् ।
वाचकत्वभ्रमेणैव वाच्यज्ञानं प्रवर्तते ॥
वाचकत्वभ्रमश्चापि पुंसां सङ्केतकल्पितात् ।
प्रमाणान्तरसंवादाज्जयाति सहसा लयम् ॥

१. आरोपविषयीभूतं ज्ञानकारणमिदं घटादिरूपं चेत् तत् भ्रमान्तररूपं कार्यं न
जनयति । तस्य तत्त्वभावविरहात् । तज्ज्ञानकारणभ्रान्तिः, तत् ज्ञानकारणं धूमादिरूपं चेत्
कार्यं भ्रमान्तरं जनयति । तस्य तत्त्वभाववत्त्वादित्यर्थः ।

प्रमाणान्तरसिद्धेषु तत्तदर्थेषु सूरयः ।
 यथायथं प्रयुज्जानांशब्दान्संवादयन्ति हि ॥
 विसंवादोऽपि मूयिष्ठो यश्शब्देषूपलभ्यते ।
 सच संबन्धसंदर्भसाधारण्येन नीयते ॥

न हि संदर्भदोषेण जायमानो विसंवादसंबन्धाध्यासजनिताद्विलक्षणएवेत्यस्ति प्रमाणम् । तत्र शब्दाभासानामपि यादृच्छिकसंवादि लिङ्गाभासानामिव प्रमाणान्तरेण संवादोपलंभात्तत्प्रत्ययानुसारिभिर्यवहारोऽभङ्गुर एव प्रवर्तते (त्ये ?) ते । न च कश्चिदपि शब्दार्थ इत्येव लोके विश्वसिति अपित्वाप्तोक्तिरित्येव । तत्र वक्तृज्ञानानुमानद्वारेणवा तन्मूलप्रमाणान्तरानुसारेणवा प्रत्यय इति लोकव्यवहारस्थितिः । वेदेतु—

प्रत्यक्षवत्स्वशक्त्यैव शब्दोऽर्थं प्रतिपादयन् ।
 न केनापि प्रमाणेन विसंवादं प्रपद्यते ॥
 न हि तत्राप्तविज्ञानं नचमानान्तरोद्भवः ।
 निश्चयार्थं नैर्मृग्यः स्वतःप्रामाण्यसिद्धितः ॥
 येषां शब्दस्य मानत्वं.....[तुल्यव] णं प्रमान्तरैः ।
 तेषां स्वातन्त्र्यमेष्टव्यं नित्यत्वेनैव नान्यथा ॥^१
 न प्रमाणान्तरप्राप्ते प्रमाणान्तरकल्पना ।
 य (त ?)दा प्राप्तप्रमाणत्वं वक्तृमानानुसारि तु ।

ननु च—

सामान्येनाप्तता यस्य पुंसस्सिद्धाप्रमाणतः ।
 तद्वाक्यात्त्वार्थभेदेषु प्रमाणं किं न कल्प्यते ॥

नैतदेवं... [य]तः

प्रतिवाक्यं हि वक्तृणामाप्तत्वमवगम्यते ।
 विप्रलम्भादनाप्तत्वे (न विप्रलम्भनादाप्तो ?) न तन्मात्रोक्तिसत्यता

१. अयमर्थः :— वेदस्य प्रमाणान्तरतुल्यं अनधिगतार्थावबोधकस्वरूपं प्रामाण्यं नित्यत्वं एव सिद्ध्यति न पौरुषेयत्वे । तथा सत्यर्थं बुद्ध्वा शब्दरचनेति न्यायेन पुरुषाधिगतार्थावबोधकत्वस्यैव सिद्ध्या तद्व्याघातादिति ।

न चानुमानादिकस्य सिद्धिरस्तीति वक्ष्यते ।

न तत्ज्ञानेन (ज्ञानेऽस्ति?) सत्यत्वं स्वतः प्रामाण्यवर्जने ॥

स्वतः प्रामाण्यमेष्टव्यं शब्दप्रामाण्यवादिभिः ।

तच्चापि शब्दनित्यत्वद्वारेति परिनिष्ठितम् ॥

येचैन्विताभिधानं नेच्छन्ति तेषामपि शब्दप्रामाण्यासिद्धिः ।

विशिष्टज्ञानहेतुत्वातिरेकेण चेष्टानुमानसाधर्म्यातिक्रममार्गस्य दुर्लभत्वात् ।
तत्साधर्म्ये च तस्यापि शब्दवत्प्रमाणान्तरत्व-मिच्छतां प्रागुक्त एव परिहारो द्रष्टव्यः ॥

इति भगवद्रामानुजमुनिवरमतधुरंधरस्यात्रिगोत्रप्रदीपश्रीपद्मना-

भार्थनन्दनस्य वादिहंसनवाम्बुदस्य श्रीमद्रामानुजाचार्यस्य

कृतिषु न्यायकुलिशे सिद्धार्थव्युत्पत्ति

समर्थनवादः प्रथमः ॥

१. वेदपौरुषेयत्ववादिमते शब्दप्रामाण्यासिद्धिमुपपाद्य तदपौरुषेयत्ववादेऽप्यन्विताभि-
धानानादरेणाभिहितान्वयाङ्गीकारे शब्दस्य प्रामाण्यं न सिध्यतीत्युपपादयति येचेत्यादिना ।

२. विशिष्टज्ञानहेतुत्वं — परस्परांश्वितार्थविषयज्ञानहेतुत्वम् ॥

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SABAPATHI VILASA NATAKA

—Mm. Dandapaniswami Dikshitar.

आरुढो वैनतेयं कनकगिरिनिभं पाणिपद्माग्रजाग्र-

च्चक्रोदग्रप्रभाभिर्दिशि दिशि विकिरन्नैकमादित्यजालम् ।

नव्यामम्भोदमालां विदधदधिनभः कायकान्तिप्ररोहैः

आविस्मेराननेन्दुः प्रविशति सविधं चित्सभाया मुकुन्दः ॥२१॥

(नेपथ्ये महान्कलकलः)

कौण्डिन्यः—(सभयम्) को इमो संवत्तपवणोत्थिअपुक्कूलावत्तअगर्जितलज्जावहो
महुमहणचरणाहिघादभिज्जन्तबम्मण्डखण्डणीसरिदबहुलावरणजलघोसगव्वस-
व्वंकषो सुणासीरकडिणकुलिसखण्डिअकुलपव्वदपकखपदणरअनित्तंभओ
महाधोसो । (छाया) कोऽयं संवर्तपवनोत्थितपुष्कलावर्तकगर्जितल-
ज्जावहो मधुमथनचरणाभिघातभिद्यमानब्रह्माण्डखण्डनिस्सरद्वहुलावरणजलघोष-
गर्वसर्वङ्कषःशुनासीरकठिनकुलिशखण्डितकुलपर्वतपक्षपतनरयनिस्तम्भको महा-
घोषः ?

पतञ्जलिः—(निरूप्य) सखे ! व्याघ्रपाद ! सफलमस्माकमिदानीं जन्म । यतोऽतिदू-
राच्छ्रूयन्ते प्रमथानामतिगम्भीरः दक्काडमरुकशंखरवपुंखितो महानयं सिंहनादः
(सर्वे सानन्दं प्रणमन्ति, उत्थाय विरचिताञ्जलयः तिष्ठन्ति)

व्याघ्रपादः—(सहर्षसम्भ्रमम्)

आवल्गितैः तत इतस्त्रसरेणुपुञ्जैः

आप्यैरहस्करकरान्जडतां नयन्तः ।

आवान्त्यमी हरकिरीटविटङ्कलोल-

मन्दाकिनीतनुतरङ्गभवाः समीराः ॥ २२ ॥

उपमन्युः—(पुरोऽवलोक्य सानन्दम्)

फणिपतिकटकैर्बाहादण्डैर्जाज्वल्यमाननिटिलदृशः ।

त्वङ्गडुमरुकशूलाः रिंघन्त्येते परःशतं प्रमथाः ॥ २३ ॥

कौण्डिन्यः—अंहहे तदो इदो रअणदण्डमण्डिमोत्तिआतपत्तविमलचामरकण-
अकलशभिङ्गारुमुकुरधारिणीणं पमहविलासिणीणं ससंभमचरणविण्णास-
चटुलनूउरसद्दसमुदञ्चिणसिञ्चिणसरभससमापतन्तपमहणिउरुम्बपरप्पराङ्ग-
सङ्गतरलन्तसिसूलसिहासन्ताडनमुहरिआणं डमरुआणं सुदि-
पुडमहुरेण डिमिडिमिणिणदेण विविहमुखगणमुहमारुदपूरिआणं जलजाणं
अदिगम्भीरेण धुमधुमघोसेण विस्मयावणमन्तणारदमुहवेणिअकरपल्लव
विप्पाटिआणं वल्लईणं अदिमहुरेण णिक्कणेण गाअन्तीणं किण्णरीणं
नडन्तीणमच्चराणं मेहलाकंकणझणझणङ्कारेण जअजअन्ति णमन्ताणं जणा-
णञ्च कोलाहलेणअ सद्दादुदीओविअ एसो पवञ्चो ॥ (छाया) अहो ! तत-
इतः, रत्नदण्डमण्डितमौक्तिकातपत्रविमलचामरकनककलशभृङ्गारुमुकुरधारि-
णीनां प्रमथविलासिनीनां ससम्भ्रमचरणविन्यासचटुलनूपुरशब्दसमुद-
ञ्चितेन शिञ्चितेन सरभससमापतत्प्रमथनिकुरुम्बपरस्पराङ्गसङ्गतरलत्रि-
शूलशिखासन्ताडनमुखरितानां डमरुकाणां श्रुतिपुटमधुरेण डिमिडि-
मिनिनदेन, विविधमुखगणमुखमारुतपूरितानां जलजानामतिगम्भीरेण धुमधु-
मघोपेण विनयावनमन्नारदमुखवैवणिककरपल्लवविस्फारितानां वल्लकीनां
अतिमधुरेण निक्कणेन गायन्तीनां किन्नरीणां नटन्तीनामप्सरसाञ्चमेखला-
कंकणझणात्कारेण जयजयेति नमतां जनानां चटुलकोलाहलेनच
शब्दाद्वितीयइव एष प्रपञ्चः ।

पतञ्जलिः—सखे निपुणमाकर्णयास्मिन् शब्दैर्कार्णवौघे ।

वेदान्तवेद्य इति शङ्कर इत्युमाया

भर्तेति शम्भुरिति पालयितेति लोकान् ।

ओङ्काररूप इति कश्चिदिहोज्जिहीते

कर्णामृतं किमपि काहलिकानिनादः ॥ २४ ॥

व्याघ्रपादः—(सपुलकोद्गमं पतञ्जलिमालिङ्ग्य) सखे ! किं कथयामि ; मनसोप्यविषय-
मानन्दमनुभवामि ।

उपमन्युः—(पुरोऽवलोक्य सविस्मयम्)

चलति पुरतो मेरुः किंवा विभावसुमण्डलं

किमुत तडितां वृन्दं किंवा रवेरियमावली ।

अहह किमिदं वारंवारं बलादपि चोदिता

नयनपदवीं मुष्णत्पुष्णाति तत्त्वमदो जगत् ॥ २५ ॥

पतञ्जलिः—(साश्चर्यम्) प्रथमं प्रमथा इति गणेन्द्रा इति व्यक्तिविशेषविभक्ता समेयं
केवलमिदानीं तजोविशेषव्यतिकरदुरालोका दृश्यते

कौण्डिन्यः—इमादो ओहसिआणेअसहस्सकिरणमण्डलच्छायादो फहाकदंबादो
दोस्सि एदे णिस्सरन्ति मुत्तिमन्तोविअ दिवसअरणिसाअरा महापुरिसा ।
(छाया) अस्मादपहसितानेकसहस्रकिरणमण्डलच्छायात्प्रभाकदम्बाद्वावे
तौ निःसरतो मूर्तिमन्ताविव दिवसकरनिशाकरौ महापुरुषौ ।

व्याघ्रपादः—(सानन्दगद्गदम्) सखे ! पतञ्जले ! दिष्ट्या भगवानितएवाभिवर्तते
भानुकम्पेन उपास्यमानो मुग्धेन्दुभूषणः ।

पतञ्जलिः—भगवतोमूर्त्यन्तरमयोऽखिलगणानामीश्वरोनन्दिनेश्वरोऽयम् ; अखिलानपि
सेवासमागतानमराधिपानुच्चलितविचित्रवेत्रलतःसंस्थापयन्ततइतःसञ्चरति ।

(सर्वे कृतयथोचितसमुदाचाराः विरचिताञ्जालयः तिष्ठन्ति)

(ततः प्रविशति वेत्रपाणिः नन्दिकेश्वरो भानुकम्पश्च)

नन्दी—(समन्तादवलोक्य, किञ्चिदुच्चैः)

विष्णो ! स्वागतमत्र तावदधुना ब्रह्मन्निहैवास्यतां

शक्र ! त्वं धुरि तिष्ठ साकममरैर् ब्रह्मर्षयः ! स्थीयताम् ।

नाथः पश्यति नः सभापतिरयं देव्या सहैवोमया

कारुण्याम्बुनिधिः करोति दहराकाशान्तरे नर्तनम् ॥ २६ ॥

भानुकम्पः—(साटोपम्) भो भोः पुरशासनकटाक्षलवलब्धनिजाधिपत्याः सर्वेप्या-
दित्याः किमितिबधिरयन्ति दिगन्तराणि भवन्तो नटराजपदारविन्दनूपुररव-
तिरोधानकलमषकलुषेण वृथाकलकलमुखरेण परस्पराङ्गचमत्कारचटुलभूषणम-
णिगणखणखणाटोपेन । नन्वेते सन्निहिताः खलु शङ्करकिङ्कराः ।

पतञ्जलिः—सखे ! पश्य अनेन भानुकम्पवचनसंरम्भेण निष्कम्पमजनि चित्र-
गतमिव सर्वमपि गीर्वाणचक्रम्

(सर्वे विस्मयन्ते)

नन्दी—वत्स ! भानुकम्प ! (सर्वतोऽवलोक्य) कुतो वा भगवतः प्रियभक्तौ पतञ्जलि-
व्याघ्रपादौ ?

भानुकम्पः—नातिदूर एवैतौ । नन्दी—(सानन्दमुपसर्पति)

(पतञ्जलिव्याघ्रपादौ, उपमन्युकौण्डिन्यौ च सप्रश्रयमुपसृत्य नमस्कर्तुमुद्युञ्जते)

नन्दी—(सानन्दमुभावाल्लङ्घ्य) न सांप्रतमितरनमस्कारः देवदेवसन्निधाने । वत्स !
पतञ्जले ! वाचां खलुपारेभवदीयमत्यद्भुतं चरित्रम् ।

विधिहरिमुखदेवा वीक्षितुं यद्यतन्ते

विहितविमलयोगाद्ध्यानमयैव दृष्ट्या ।

तदिह हि तपसित्वा चार्मणीनां दृशाम-

प्यहह पथि पुरारेस्ताण्डवं दर्शितं यत् ॥ २७ ॥

पतञ्जलिः—(सप्रश्रयमञ्जलिबध्वा) देवदेवस्यैवायं प्रभावः यः पुनरगुं पर्वतयति ; पर्वत-
मप्यणयति.

नन्दी—(निवृत्य) वत्स ! व्याघ्रपाद !

यत्तप्तं परमं तपो भगवतः श्रीमूलनाथस्य यत्

पूजा यत्तनयोपनीतमपि ते मान्यं चरित्रं विभोः ।

यद्योगोपि महानभूदभिरतिः चित्ते च यद्भूयसी

सर्वस्यास्य फलं सदृक्षम् (पुनर्विचिन्त्य) अथवा लब्धं त्वयाऽहैतुकम् ॥

व्याघ्रपादः—(सविनयम्) यदाह द्वितीयपरमेश्वरः ।

भानुकम्पः—सखे ! व्याघ्रपाद ! कच्चिदिदं स्मर्यते यद्देवेनाथावादिष्टम्—“ देवः
त्वय्यनुकम्पते ” इति पठति ।

व्याघ्रपादः—स्मराम्यनुभवामिच ।

नन्दी—अभ्यन्तरभक्तौ खलु युवां देवस्य ; तत्समीपे तिष्ठतम् । (इत्युभौ हस्ताभ्यां गृहीत्वा
देवस्य पार्श्वयोः स्थापयित्वा,) पश्य तं नेत्रयोरमृतवर्षम् । अपनीतैव
करुणानिधिना मायायवनिका । अयमिदानीम्—

किञ्चित्कुञ्चितवामहस्तचरणः किञ्जल्कितास्यस्मितो

भूतस्थापितदक्षिणाङ्घ्रिरभयं हस्तेन बिभ्रन्मुदा ।

अन्याभ्यां डमरुं विभावसुशिखां पाण्यम्बुजाभ्यां वहन्

देवो नृत्यति दिव्यसंसदि जगन्नेता सभानायकः ॥ २९ ॥

इतश्च प्रणम्यतां जगन्माता—

अतिघनकरुणासमुत्तररैरखिलजगन्त्यपि पालयन्त्यपाङ्गैः ।

गिरिशनटनसाक्षिणी सुधाभिर्नयनपथे शिवकामसुन्दरीयम् ॥ ३० ॥

अयञ्च देवो लम्बोदरः ; अयञ्च कुमारः ।

पतञ्जलिः—(सपुलकमञ्जलिबध्वा) देव शरणागतवत्सल ! करुणासागर ! प्रसीद सभापते !

किञ्चित्कुञ्जितवामपादकमलप्रेङ्खन्मणीनृपुरं

चञ्चत्काञ्चनकिङ्कणीधनधनारम्भप्रियंभावुकम् ।

आमन्दस्मितचन्द्रिकापरिमलक्रीतानमन्मानसं

किंवा भाग्यमकारि ताण्डवमिदं द्रष्टुं जगन्मोहनम् ॥ ३१ ॥

व्याघ्रपादः—(निरन्तरकन्दलदानन्दबाष्पः शिरस्यञ्जलिनिधाय) देव ! भक्तपरिपालन-
जागरूक !

दिगन्तरनटजटालुलिततुङ्गगंगोल्लल-

तरङ्गकुलभाङ्गिकव्यामुखररोदसीमण्डपम् ।

इदं नटनमीक्षितुं तव चिदम्बरेश ! प्रभो !

दयामय ! कियन्मया न सुकृतंपुरोषार्जितम् ॥ ३२ ॥

उपमन्युः—(पुरोवलोक्य) (साश्चर्यम्)

नालं ब्रह्माण्डचक्रं त्रिपुरहरजटाखेलनाडम्बराणां

नालं सप्तार्णवी सा मकुटतटलुठसिन्धुबिन्दुच्छटानाम् ।

नालं पातालमूलं भ्रमिनमदवनीपातपौनःपुनीनां

नालं नःचक्षुषी द्वे किमपि पशुपतेरीदृशामुत्सवानाम् ॥ ३३ ॥

कौण्डिन्यः—(सपुलकमञ्जलिबध्वा)

अच्छीणं मधुपक्वसत्तममलं केवल्यघण्टापहो
सव्वस्सं सअलोस्सवस्स परमानन्दस्स गब्भालयो ।
अच्छेराणमियत्तणं किमवरं सारस्स सारं पुणो
अङ्गाणं सुहाहिसेअकलणं देवस्स तं तण्डवम् ॥ ३४ ॥

(छाया)

अक्षणां मधुपर्कसत्रममलं कैवल्यघण्टापथः
सर्वस्वं सकलोत्सवस्य परमानन्दस्य गर्भालयः ।
आश्चर्याणामियत्ता किमपरं सारस्य सारः पुनः
अङ्गानाञ्च सुधाभिषेककरणं देवस्य तत् ताण्डवम् ॥

व्याघ्रपादः—(सगद्गतम्)

जटापटलधारिणे जनिभवश्रमोत्सारिणे
सदाविनतनन्दिने सकलदेवतानन्दिने ।
शिवाय परमात्मने शिवपदाय विश्वात्मने
नमो दहरवासिने नटनकेलिकोद्भासिने ॥ ३५ ॥

पतञ्जलिः—(देवीं प्रणम्य सप्रश्रयम्) जय ! जय !! जगदम्ब ! जलरुहभ-
वमुख्यनाकालयव्यूहसेवासमानम्रकोटीरकोटीमणीधोरणीभानुभास्वत्पदाब्जे !
नमच्चित्तरागासिके ! चित्तरङ्गासिके ! अगाधसंसारहिंसासमातङ्कशङ्कागदङ्का-
रवीक्षाङ्कुरे ! अखण्डविध्यण्डषण्डोपरिद्योतमानालयाकल्पकल्पद्रुमानल्प-
पुष्पभ्रमद्रभृङ्गगीतोदयोलासिचिन्तामणिस्यन्दमानाम्बुपूरातिवर्धिष्णुपर्यन्तपी-
यूषपायोधिरिहृत्तरङ्गच्छटाटोपवल्गात्कणश्रेणिजीवत्प्रपञ्चप्रवृत्तस्तुत प्रक्रिये !
ऽविक्रिये ! मन्द्रचन्द्राङ्कुरोत्तंसफालनलज्वालमालौघलीलापतङ्गीकृतानङ्ग-
सङ्गीवनावलोकिते ! भूरिकारुण्यभारातिखिन्नाशये ! वल्गु-
पाशाङ्कुशेक्षुस्फुरच्चापपुष्पेषुहस्ते ! नमस्ते समस्तैकमातः ! शिवे ! जयजय

शिवकामसुन्दर्यनन्तंदिगन्तंभजन्तंगुणं तावकंभावुकं किं पुनस्ततो तुमस्ती-
हकश्चित् सुधीरत्र वृत्ताहिते शस्त्रशब्दासहे ; प्रस्तुतत्रासशुष्यद्वपुष्य-
ञ्जसाभूरिशान्तविषि ज्यातिषिस्वाहया सेविते ; जीवित्तेजीवितेशे निराशे मुहु-
स्त्रस्यति प्रायशोरक्षसि प्राणरक्षौषधंकाङ्क्षति द्रागहोपाशिनि व्याकुले-
चानिले वित्तनाथेऽप्यथस्वस्तिकामे चिरालज्जयाभङ्गुरे शङ्करे कुण्ठदोर्दण्ड-
चण्डिनि हापुण्डरीकेक्षणे मुक्तलज्जामरं त्रस्तविद्याधरं भग्नसाध्यच्छटं खिन्न-
खिन्नोरगं भिन्नतुन्नार्णवम् खण्डघमानाण्डजं चूर्ण्यमानाचलं पाटघमानद्रुमं
भक्षितैणाङ्कं पातिताहस्करं निर्मनुष्यन्निरालोकमेवं जगद्धाधमानं चिरादेध
मानं बलादन्तकस्यान्तकं वेधसो वेधसश्चेध्वरस्येश्वरं शार्ङ्गिणः शार्ङ्गिणं
सर्वलोकद्रुहं माहिषासुरं प्रोद्यतानेकदोर्दण्डषण्डोललत्वेदस्वङ्गासिशंखेषु-
बाणासनाद्यायुधस्तोमकिम्भीरिताशावकाशा ; समप्रोच्चलत्पुष्कलवर्तकध्वान-
धिकारचञ्चून्मिषसिंहनादार्भटीविस्फुटत्सर्वविध्यन्डभाण्डा ; तट्टिकोटि-
सन्दोहनिन्दाकरा मन्दकल्पान्तकालान्तकालीकनेत्रानलोल्लाससच्छात्रकृच्छ्रेत-
रज्वालमालापुषा धीरधीरस्वनद्धण्टिकाकाण्डनिर्घातघोषत्तटत्सन्धिवन्धाधि-
काद्रीन्द्रनिर्यच्छिलाधूलिकापालिकापीतदैत्यौघमेहसवद्रक्तधारापगापूरजालेन-
शूलेन निर्मिद्य चण्डश्च मुण्डन्निशुम्भश्च शुम्भंमधुं कैटभश्चाभि-
हत्वा समस्तासुरानीकमुत्तेजिता वीरलक्ष्मीविलासेनदेवि त्वमेवह्यरक्षः समस्तं
समस्तं जगत्तत्क्षणे किं ब्रुवे वा प्रसन्नामपि त्वां नसन्नाभयेनाक्षमानेक्षितुं
वाऽमरास्तेऽपिते विक्रमप्रक्रियाजल्पनेऽरूपे पुनः के वयं किं पराऽलं गिरां
देवता सापि किं वा परैस्त्वां त्वमेवाभिजानासि लोकाननेकान्यदेकासृजस्या-
दरेणावसि ध्वंसयस्यम्ब ! केयूरकोटीरभेदेनभिन्नं यथा स्वर्णमेकं तथोपाधि-
भेदादनेकासि ते मायया मोहिता ह्याद्रियन्ते परं दैवतं नैव संविद्वते
त्वां परं तत्त्वं इत्यल्पपुण्या जना दोष एषत्वयोत्पादितः किं ? नवा यत्प्रप-
ञ्चस्य संवृद्धये नैकमार्गाः कृताः ॥ तावता माद्यति, क्रुध्यति, द्रुहति,
त्रस्यति, स्पर्धते, खिद्यते क्लिश्यते, याचते, नश्यति अश्यति प्रायशोऽयं-

जनः ; त्वां परेश्रद्धयाराध्य साध्यान्तरं सन्त्यजन्तो मुधैवाभिमानञ्चभोगं तृणा
याप्यमत्वाऽमृतत्वं भजन्ते हरप्राणभूते ! जगत्प्राणशीले ! भवत्पादसेवाविधिः
सर्वलभ्यः किमस्माकमप्यक्षिपद्यां गतासीति चित्रं यतः तादृशैरप्यजस्रं
मुनीन्द्रैः विभृग्यासि तत्त्वामहं भावये चेत्तसा पाहि शं देहि शैलात्मजे ! ॥

(नेपथ्ये)

अयि ! वत्सौ पतञ्जलिव्याघ्रपादौ !

प्रसन्नोऽहं भक्त्या तव तव च यद्वाभिलषितं
युवामिष्टौ भक्तौ वदतमविलम्बं तदधुना ।
सुखोदकं जन्तोः स्मृतमपि च मत्ताण्डवमिदं
समं देव्या दृष्टं यदि किमुत किञ्चात्र दहरे ॥ ३६ ॥

व्याघ्रपादः—(सरोमाञ्चमञ्जलिबध्वा) देव ! भक्तजनवत्सल !

भगवत्ताण्डवालोकपरमानन्दतोऽपि वा ।
अन्योऽस्ति किं वरः तस्मादस्तु सोऽयं सदैव मे ॥

पतञ्जलिः—(सप्रश्रयम्) देव ! करुणानिधे !

मम माध्यन्दिनेश्चापि मुनीनामत्र वासिनाम् ॥
अलंभावो हि न भवेद्युष्मत्ताण्डवदर्शने ॥ ३७ ॥

निस्तरन्तु महाभोरं सद्यः संसारसागरम् ॥
न पिबन्तु पुनस्तन्यं मातुः ताण्डवदर्शिनः ॥ ३८ ॥

तदत्र यत्कृतं नृत्तं सर्वमङ्गलया सह ॥

साक्षाद्भूयोपि सर्वेषां तज्जायेत सदातनम् ॥ ३९ ॥

(नेपथ्ये एवं भवतु)

नन्दी—(किञ्चिदुच्चैः) रे रे गणेन्द्रा माविषीदत तिरश्चामपि दृग्विषयो देवताण्डवमिति
को वा निवारयिता स्वतन्त्रस्याध्यवसितम् ?

(नेपथ्ये)

तरलहृदयाः किं वा वर्तामहेऽत्र चिदम्बरे
नटनमनिशं शम्भोर्नित्यं निरीक्षितुमीशमहे ॥
किमपि तपसा पूता माध्यन्दिनेश्च पतञ्जलेः
पशुनरसुराः सर्वे निर्वेदपारमुपागताः ॥ ४० ॥

भानुकम्पः—(सश्लाघम्) वत्सौ पतञ्जलिव्याघ्रपादौ ! भवतोऽभिनन्द्यते चरितमिद-
मखिलैरपि वैमानिकैः

उभौ—(तूष्णीमधोमुखौ तिष्ठतः)

(नेपथ्ये) (कलकलानन्तरम्)

भामैष्ट त्रिपुरान्तकस्य सविधे सिंहो जनान्बाधते
किं वा मुञ्चत मानुषा भयवशादाकस्मिकं संभ्रमम् ॥
अस्मिंस्तीर्थवरे निमज्जति ननु श्रीसिंहवर्मा नृपः

उपमन्युः—(साश्चर्यम्) तात सिंहवर्मा नृपतिरागत्य शिवगंगायां स्नाति

व्याघ्रपादः—(सहर्षम्) देवदेवप्रसादपात्रं भवतु तपस्वी ।

(पुनर्नेपथ्ये)

हन्ताश्चर्यमिदं सुवर्णसदृशो राजायमालोकयते ॥ ४१ ॥

(सर्वे विस्मयं रूपयन्ति)

व्याघ्रपादः—(नन्दिकेश्वरमपवार्य) देव ! चिरादेष सिंहवर्मा भगवति महाभक्तियुक्त
तदनुभवतु भगवत्ताण्डवावलोकनमहोत्सवम् ।

नन्दी—(सन्निधानमभिगम्य, देवस्य भूसज्ञासुपलक्ष्य) व्याघ्रपाद ! भगवता अनुज्ञातः
एव तदाहूयतां हिरण्यवर्मा ।

पतञ्जलिः—देव ! सिंहवर्मेति वक्तव्यम् ।

नन्दी—तथैवायं शिवगंगामज्जनात्पूर्वम् ; इत आरभ्य देवप्रसादेन हिरण्यवर्मैवायम्

(सर्वे प्रमोदन्ते)

व्याघ्रपादः—वत्स ! कौण्डिन्य ! झटित्याहूयतां हिरण्यवर्मा ।

कौण्डिन्यः—तहा (इति निष्क्रम्य हिरण्यवर्मणा सह प्रविश्य) इदो इदो महाराओ ।

हिरण्यवर्मा—(देवास्थानीं दृष्ट्वा साष्टाङ्गं प्रणम्य, उत्थाय सपुलकमञ्जलिं बध्वा)

जय जय कनकसभेश जय जय शिवकामसुन्दरीनाथ ।

जय जय करुणासिन्धो जय जय नाट्यैकदेशिक नमस्ते ॥ ४२ ॥

(इति पुनः पुनः प्रणम्य पतञ्जलिव्याघ्रपादावुपसृत्य कृताञ्जलिः तिष्ठति)

भानुकम्पः—देव ! इतो भगवदनुज्ञया कार्शीगतेन यियक्षुणा पुनरप्यागतं परमेष्ठिना ।

नन्दी—कस्य हेतोः ?

भानुकम्पः—यागे समाहूता अपि नागता भगवदानन्दनटनरसव्यापृताः सर्वे गीर्वाणगणा-
इति ।

नन्दी—उच्यतां परमेष्ठी त्रिसहस्रमुनीन्द्रानादाय समापयाध्वरमि इति ।

भानुकम्पः—तथा (इति निष्क्रम्य पुनः प्रविश्य) यथादिष्टमनुष्ठितम् । अन्यच्च ।

नन्दी—किमन्यत् ?

भानुकम्पः—एष खलु मैत्रावरुणिः अमुं मनुवंशप्रसूतिं हिरण्यवर्माणमभिषेचयितुकामो-
वर्तते ।

नन्दी—वत्स ! हिरण्यवर्मन् ! नेदानीमुत्तरं दातव्यम् । कर्तव्यञ्च भवता मण्डपगोपुरादिक-
मनेकं भगवतः कार्यम् । तदनेन कुलगुरुणासह निजं देशमधिगत्य ; चिरं
धर्मेण पालयित्वा प्रजाः, चतुर्मुखानीतैः त्रिसहस्रमुनीन्द्रैः समं पुनरप्या-
गम्यताम् ।

हिरण्यवर्मा—यदादिशति द्वितीयपरमेश्वरः ।

(नेपथ्ये)

किमन्यच्चावां प्रियमुपहरामि ?

उभौ—(साञ्जलिबन्धम्) देव ! कारुण्यसागर !

संसारोत्तरणौषधं पथि दृशो नाट्यं सदा तावकं
संप्राप्तश्च हिरण्यवर्मनृपतिर्देव ! प्रसादादयम् ।
कैलासादधिकं चिदम्बरमभूद्धामेदमूर्जस्वलं
किं नामान्यदितः परं भगवतो याचावहे सांप्रतम् ॥ ४३ ॥

तथापीदमस्तु (भरतवाक्यम्)

वाग्देव्या सममिन्दिरा विहरतां वर्षन्नपो वासवः
लोकस्यास्तु सुखाय नीतिनिरता रक्षन्तु पृथ्वीं नृपाः ।
भूयासुश्च चिदम्बरे निवसतां पुंस्वानुपुंस्वाः श्रियः
चेतः खेलतु चित्सभापतिपदाम्भोजे जनानां सदा ॥ ४४ ॥

इति निष्क्रान्ताः सर्वे)

पञ्चमोऽङ्कः समाप्तः

॥ नाटकञ्चेदं समाप्तम् ॥

श्री

॥ श्रीचित्सभेशाय मङ्गलम् ॥

॥ श्रीसभापतिविलासनाटकम् ॥

अस्य किल नाटकस्य कविः मध्यार्जुनक्षेत्रपरिसरवर्तिमणल्लर्ग्रामाभिजनो धर्म-
राजमनीषिनन्दनो वैयाकरणसार्वभौमो वेङ्कटेश्वरनामा । अत्रनाटके प्रधाननायको
व्याघ्रपादः उपनायकः पतञ्जलिः महाभाष्यकारः । फलम्—श्रीमन्नटराजानन्दताण्डव-
दर्शनम्, इतिवृत्तं प्रख्यातं सूतसंहितादिषु ; चिदम्बरक्षेत्रवैभवप्रदर्शनपरम् ॥ रसश्च
भक्तक्रयपरपर्यायः शान्तः ; अङ्गतया सुनिवेशितैः शृङ्गारादिभिरन्यै रसैरुपस्कृतः ।

॥ कथासङ्ग्रहः ॥

प्रथमेऽङ्के—श्रीचिदम्बरक्षेत्रे तपस्यतो व्याघ्रपादस्य परिचर्यया प्रसन्नेन परमेश्व-
रेण चिदम्बरे निजानन्दताण्डवप्रदर्शनसमुचितस्थलपरीक्षार्थं कैलासा-
त्प्रेषितो नन्दिकेश्वरः निलीनपद्मं तिलवाटवीमभ्येत्य शिवगङ्गातीरं तपस्यन्तं
व्याघ्रपादमवलोक्य, श्रीमूलनाथालयं गत्वा ; व्याघ्रपादस्य भक्त्यतिशयं
भगवदनुग्रहप्राप्तद्वारलभञ्चाभिनन्द्य ; प्रसङ्गात्तत्रागतं भानुकम्पं गण-
विशेषं व्याघ्रपादादेशनाय सन्दिश्य, पुनः कैलासं प्रति प्रतस्थे इत्य-
भ्यवर्णि ॥

द्वितीयेऽङ्के—व्याघ्रपादसूनोः संवर्द्धनाय भगवता श्रीमूलनाथेन क्षीराब्धिप्रदानम्
गर्भाङ्कद्वारा । सत्यलोकादागतेन शैलूषगणेन “ दारुकावनविलासाभिधनाट-
काभि नयः । तत्र च मोहिनीरूपधारिणः श्रीमन्नारायणस्यः, भिक्षाटनरूप-
धारिणः श्रीपरमेश्वरस्यचात्यद्भुतशृङ्गारचेष्टाभिनयश्च प्रत्यदर्शि ॥

तृतीयेऽङ्के—श्रीकृष्णस्य सत्यभामया सह तिल्ववने नानाविधशृङ्गारविलासाः ;
उपमन्युसकाशाच्छिवदीक्षावरलाभश्च वर्णितः ।

चतुर्थेऽङ्के—मयनिर्मितचित्रपटदलूनव्याजेन सर्वाणि शिवक्षेत्राणि तत्तन्महिमविशेषा-
दिप्रदर्शनपूर्वकं उपवर्ण्य, श्रीमत्पतञ्जलिचरितं प्रपञ्चितम् ॥

पञ्चमेऽङ्के—चिदम्बरक्षेत्रे सकलदेवसन्निधौ श्रीमन्नटराजस्यानन्दताण्डवप्रदर्शनं ; तत्प्र-
शंसाचपतञ्जलिव्याघ्रपादयोर्वरप्रदानम् हिरण्यवर्मणो वरप्राप्तिः तस्य
राज्याभिषेकश्च वर्णितः ॥

इति शिवम् ।

SIDDHITRAYA

By
Yāmunācārya

Edited with English Translation and Notes

By
R. RAMANUJACHARI
AND
K. SRINIVASACHARIAR

॥ श्रीः ॥

सिद्धित्रयम्

आत्मसिद्धिः

१. प्रकृतिपुरुषकालव्यक्तमुक्ता यदिच्छा-

मनुविदधति नित्यं नित्यसिद्धैरनेकैः ।

स्वपरिचरणभोगैः श्रीमति प्रीयमाणे

भवतु मम परस्मिन्पूरुषे भक्तिभूमा ॥ १ ॥

विरुद्धमतयोऽनेकास्सन्त्यात्मपरमात्मनोः ।

अतस्तत्परिशुद्धयर्थमात्मसिद्धिर्विधीयते ॥ २ ॥

1. May I have the highest bhakti to that Supreme Puruṣa to whose will matter (prakṛti)¹, bound souls (puruṣa)², time, manifest material nature, released souls and innumerable eternally perfect souls always conform, to that Śrīmān,³ who is ever in bliss along with many eternally perfect souls, whose sole enjoyment is in rendering service to Him. There are many conflicting views concerning the finite self and the Infinite Self. With a view to making the matter clear, the determination of the real nature of the soul is (here) undertaken.

1. Prakṛti is the primordial source of the material universe. In the state of pralaya (dissolution) it is known as avyakta (the unmanifest); in the state of sarga (evolution) it is called vyakta (the manifest).

2. Viśiṣṭādvaitism recognises three classes of jīvas—baddha (the bound), mukta (the liberated), and nitya (the ever perfect). Jainism accepts a similar classification.

3. As the prayer is for highest form of bhakti to Śrīmān, it is evident that Yāmunācārya considers the Lord Nārāyaṇa along with Lakṣmī the means of salvation, even as He, in conjunction with her, is the supreme goal.

२. सम्मतं हि सर्वसमयेषु आत्मज्ञानं निश्चयसहेतुरिति, श्रूयते च—पृथगात्मानं प्रेरितारश्च मत्वा जुष्टस्ततस्तेनामृतत्वमेति, आत्मानं चेद्विजानीयात्, तरति शोकमात्मवित्, ब्रह्मविदामोति परम्,—इत्यादिः परावरात्मतत्त्वज्ञानस्यापवर्गसाधनत्वं प्रतिपादयन् वेदान्त-वाक्यगणः ; तत्रास्मिन्नात्मनि परस्मिन्श्चानेकविधा विप्रतिपत्तयस्तार्थिकराणाम् ; तद्यथा आत्म-विषये तावत् देहमेव केचिदात्मानमाचक्षते, इन्द्रियाण्यन्ये, मन इत्यन्ये, प्राणमपरे, अध्यस्तज्ञातृभावमनहंकारं बोधमात्रमितरे, देहेन्द्रियमनःप्राणबोधविलक्षणमाकाशादि-वदचित्स्वभावमागन्तुकबोधमुखदुःखाद्यसाधारणगुणाधारमहंकारगोचरमपरे, अपरे तु बोधैकस्वभावमेव स्वभावधवलमिव स्फटिकमणिमुपधानविशेषापादितारुणिमगुणादि-निर्भासमन्तःकरणोपधानापादितरागद्वेषमुखदुःखाद्यशिवगुणनिर्भासमनुदितानस्तमितस्वरूप-

2. That the knowledge of the self is the means of attaining transcendental felicity is indeed admitted in all systems. "On knowing the finite self and the Supreme Controller to be different, and thereby becoming the object of His Grace, he attains immortality";⁴ "If one should know the self"; "The knower of the self crosses over sorrow";⁵ "He who knows Brahman attains the Highest"⁶—these and other texts of the Upaniṣads are found, which declare that the knowledge of the finite self and the Supreme Self is the means of liberation. Eminent teachers hold many conflicting views concerning the finite self and the Highest Person.

With regard to the individual self, some maintain that the body itself is the soul⁷; others that it is the senses; others that it is mind (manas); others that it is vital breath (prāṇa); still others that it is pure consciousness, which is erroneously supposed to possess the quality of being a knower and which does not appear as the 'I'⁸; others that it is different from the body, the senses, mind, vital-breath and consciousness and that, like ether and the like, it has a non-intelligent nature; and that it is the substratum of knowledge, pleasure, pain and other adventitious and special qualities, and that it is the object of self-consciousness.⁹ Others again say that it is of the nature of pure consciousness itself, which appears to possess inauspicious qualities, such as love, hate, pleasure, pain, etc., produced by the limiting condition of the internal organ, even as a crystal that is in itself white appears to

4. Śvet. Up. I. 6.

5. Chand. Up.

6. Tait. Up.

7. Cārvāka doctrine.

8. Advaita Vedānta.

9. Nyāya-Vaiśeṣika.

प्रकाशं स्वयंज्योतिषमिममभिदधति, अन्ये तु ज्ञानानन्दस्वभावम्, आश्रयानुकूल्य-
प्रतिलब्धानन्दसुखादिव्यपदेशबोधविशेष एवास्य स्वाभाविक इत्यन्ये ।

३. तथा अनुमानसमधिगम्यः, आगमैकवेद्यः, मानसप्रत्यक्षवेद्यः, ग्राहकतयैव
सकलविषयवित्तिषु प्रत्यक्षो ज्ञानस्वभावतयानुदितानस्तमितस्वरूपप्रकाशः स्वयं ज्योतिः,
ईदृशोऽप्यागमानुमानयोगजप्रत्यक्षैः स्वेतरसकलविलक्षणस्वाभाव्येन विशदविशदतरविशद-
तमतया अन्ततो यथावदपरोक्ष्यत इति ।

४. तथा परममहान्, अणुपरिमाणः, शरीरपरिमाणः, स्वतः परिमाणः हितोऽपि
व्याप्यबस्तुपरिमितिकृतपरिच्छेद इति, व्याप्तिरपि चैतन्यमात्रेण स्वरूपेण इति ।

possess redness and other qualities imparted to it by certain specific limiting conditions (say, an adjacent red flower); and that the luminosity of its being is neither born nor destroyed; and that it is self-luminous.¹⁰ Others again hold that it has the nature of knowledge and bliss; still others that its nature is of that knowledge which on account of its agreeableness to its possessor, acquires the name of bliss and pleasure.

3. Similarly (with regard to the means of knowledge by which it is established, divergent views have been offered, such as that) it can be known through inference¹¹; that (it) can be known only through scripture; that (it) can be known through mental perception¹²; that (it) is directly known only as the knower in all cognition of objects¹³; that, as it possesses the nature of knowledge, its luminosity is neither born nor destroyed and that it is self-luminous. Though possessed of this nature (though self-luminous), with the aid of scripture, inference, and yogic perception, it is directly perceived in its true nature as having a character different from everything other than itself, (first) clearly, (then) more clearly, and finally most clearly and immediately.

4. Similarly (with regard to its size, the rival views are that) it is infinitely big; that (it is) atomic in size; that (it is) of the same size as the body; that though in itself devoid of magnitude, it is limited to the size of the body pervaded by it. Concerning the manner of its pervasion also, (the different theories are) that it pervades only by its intelligence and that it pervades by itself.

10. Sāṅkhya.

11. Sāṅkhya.

12. Mīmāṃsā.

13. Prābhākara school of Mīmāṃsā.

५. तथा क्षणिकः यावच्छरीरोष्मस्थायी, आप्राकृतप्रलयावस्थायी, आमोक्षस्थायी, कूटस्थो नित्य इति ।

६. सर्वशरीरेष्वेकः, प्रतिक्षेत्रं नानाभूत इति च, तथातथा प्रतिपद्यन्ते ।

७. तथा परमात्मविषयेऽपि केचित्समस्तवस्तुसाक्षात्कारिणं सर्वशक्तिमीश्वरमेव नाभ्युपगच्छन्ति । अभ्युपगच्छन्तोऽप्येके प्रत्यस्तमितमितिमानमातृमेयेश्वरेशितव्यादिभेदविकल्पकूटस्थविज्ञानैकरसमनाद्यविद्योपदर्शितवियदादिभेदावच्छिन्नज्ञानैश्वर्यादिमहिमविकल्पतया काल्पनिकमावक्षते ।

अपरे तु यथोक्तस्वरूपमेव अविद्योपधानेन तद्गुणसारतया प्रकल्पितब्रह्मादिस्थावरपर्यन्तविविधजीवभेदं स्वाधीनविचित्रविवर्तस्वभावमायोपहिततया समासादित-

5. Similarly (with regard to its duration, it has been stated that) it is momentary ; that it endures as long as the bodily heat lasts ; that it exists till the material world is dissolved ; that it lasts till mokṣa is attained ; that it is unchanging and eternal.

6. Similarly (with regard to its number), it is maintained that it is one and the same in all bodies¹⁴; and that it is different in each body..

7. So also about the Infinite Self, some do not at all admit an Īśvara (God) who directly perceives all things and who is all-powerful. Some, while admitting a God, maintain that he is of the essence of pure consciousness, which is unchanging and which is devoid of the distinctions of knowledge, means of knowledge, knower, and the known, the ruler and the ruled and so on. (They hold that) on account of beginningless avidyā, he is erroneously imagined to possess knowledge of manifoldness, such as ākāśa, and greatness such as sovereignty.¹⁵

Others, while accepting this characterisation (of the Supreme Self as being of the nature of pure consciousness), state that it is subject to limiting conditions, and that, in association with the limiting condition of avidyā, for the reason of its having avidyā for its essence, it is taken to possess manifold distinctions of jīvas commencing from Brahmā and ending with immovable things ; and that, in conjunction with māyā, which is under its control and which assumes diverse wonderful changes,

14. One variety of Ekajīvavāda holds that there is one jīva residing in each of the many bodies.

15. Advaita—ekajīvavāda and also nānājīvavāda where Īśvara too is a reflection. cf. Pañcadaśī. Ch. X.

सार्वज्ञ्यादिसंपदमुपहितमिममभिदधति । तथान्ये प्रकृष्टसत्त्वोपादाननिमित्तस्वतन्त्र-
प्रधानपरिणामविशेषमात्रनियमनिर्वाहितसर्वैश्वर्यमर्यादमाद्रियन्ते । अनुपहितमपि परिणा-
मिनमपरे प्रतिपेदिरे । अपरिणामिनमपि स्वमायांशभूतविचित्रान्तःकरणदर्पणतल-
प्रतिबिम्बिततया प्रतिपन्नविश्वतैजसप्राज्ञभावं तमेकमेव चेतनमितरे रोचयन्ते ।
अन्ये तु स्वाधीनत्रिविधचेतनाचेतनस्वरूपस्थितिप्रवृत्तिभेदं स्वाभाविकनिरवधिकातिशय-
ज्ञानबलैश्वर्यवीर्यशक्तितेजःप्रभृतिसकलकल्याणगुणमहार्णवं पुरुषविशेषमीश्वरमातिष्ठन्ते ।

८. तथा तद्विशेषेऽपि हरिहरविरिञ्चिभास्करात्मनाऽनभिमततत्तन्मूर्तिपरित्यागेन च
चतुस्त्रिद्व्येकमूर्तितया विवदन्ते । मूर्तिविशेषविषयाश्च नित्यत्वानित्यत्वभौतिकत्वा-

it acquires omniscience and other glorious qualities.¹⁶ Similarly, others uphold the view that God possesses universal Lordship which is invariably and exclusively maintained for Him by the modification of independent *pradhāna*. This modification has for its cause the fact of *pradhāna* possessing the quality of *sattva par excellence*.¹⁷ Others assert that although He is free from limiting conditions, He is yet subject to modification. Others favour the view that although He does not undergo modifications, yet, on account of being reflected by the reflecting media of the diverse internal organs which are aspects of His own *māyā*, this intelligent being who is one only acquires the forms of *Viśva*, *Taijasa* and *Prājña*.¹⁸ Others hold that the Lord is that Supreme Person who has under His control the diverse forms of essence, existence and the activities of the threefold *jīvas* and non-intelligent objects, and who is the great ocean of all auspicious qualities, such as *jñāna*, *bala*, *aśvarya*, *virya*, *śakti*, *tejas*,¹⁹ and others which are natural to Him, invariable and unrivalled in excellence.

8. Similarly, even in regard to His particular manifestations, some contend that He has the four forms of *Viṣṇu*, *Śiva*, *Brahmā* and the God of the Sun ; others hold that His form is threefold or twofold or single, after eliminating those forms which are unacceptable to them. Concerning the individual manifestations (of God) doubts have been

16. *Nānājīvavāda*, on the view that *Īśvara* is the prototype not a reflection.

17. *Yoga*.

18. *Advaita* where *Īśvara* is the prototype.

19. ज्ञानमिह सर्वसाक्षात्काररूपम् *cf.* यो वेत्ति युगपत्सर्वं प्रत्यक्षेण सदा स्वतः । बलं नाम श्रमप्रसङ्गरहितं सर्वधारणसामर्थ्यम् । ऐश्वर्यं नाम अभ्याहृतेच्छं सर्वनियन्तृत्वम् । वीर्यम्=सर्वोपादानत्वे सर्वधारणे सर्वनियमनेऽपि विकाररहितत्वम् । शक्तिः=स्वेतरसर्वनिर्वाहिका सर्वोपादानत्वात्मिका । यद्वा यदन्यैरशक्यत्वादवटितमिव भाति तद्वद्वतसामर्थ्यरूपा । तेजः=अस्वाधीनसहकार्यनपेक्षत्वम् ; पराभिभवनसामर्थ्यं तेजः केचित्प्रचक्षते ॥

भौतिकत्वस्वार्थपरार्थत्वादिवितर्काः प्रादुर्भवन्ति, परिजनस्थानादिगोचराश्च ।

९. तथा प्रमाणतोऽपि आनुश्रविक एवेत्येके । आनुमानिकश्चेत्यन्ये । विशिष्ट-
प्रत्यक्षसमधिगम्यश्चेत्यपरे ।

१०. तथा आत्मपरमात्मनोः संबन्धेऽपि अनाद्यविद्योपादानभेदास्पदोऽयमीश्वरे-
शितव्यादिरूपः संबन्धः परमार्थतस्त्वेकं तत्त्वमिति केचित् । व्यतिरेकाभावेऽप्यतिरिक्तो
जीव इत्यन्ये । स्वतस्त्वैक्यमुपाधितो भेद इति विशिष्टस्वरूपभावेन भिन्नाभिन्नत्वमितरे ।
नानात्वे सत्येव अभेदो नामान्वयः अंशांशिभावलक्षणः समवायः, परतन्त्रतालक्षणः
शेषशेषित्वरूपः, स्वस्वामिभावः भृत्यस्वामिलक्षण इति च नानाविधा वादाः ।

raised about their being eternal or non-eternal, elemental or non-
elemental, whether they exist for their own sake or for the sake of
others, and doubts too have arisen concerning their attendants, place
of residence, etc.

9. Similarly, with regard to the means of knowledge some hold
that He is known from the Vedas alone ; ²⁰ others that he is established
by inference,²¹ others that He is also cognised by extraordinary per-
ceptions.

10. Similarly, in regard to the relation of the individual soul to
the Supreme Self also, some maintain that relations such as that between
the ruler and the ruled are based on a knowledge of distinctions, which
is caused by beginningless avidyā ; and that, in truth, there is only one
reality.²² Others hold that though there is non-difference, the jiva is
other than the Supreme Self. As there is oneness in point of essence
and distinction on account of limiting conditions, some posit both differ-
ence and non-difference—difference in so far as it (Brahman) is asso-
ciated with limiting conditions, and non-difference in respect of its
essence.²³

Even when there is diversity, there is the relation of non-difference
(between God and the soul); several views concerning this relation are
prevalent—that it is the relation of inherence obtaining between the
whole and the part ; that it is the relation between śeṣa and śeṣi, or in
other words, that between the independent entity and the dependent
creature; that it is the relation between the owner and the owned exem-
plified in the relation between master and servant.

20. Vedānta.

21. Nyāya-Vaiśeṣika.

22. Advaita.

23. Bhāṣkara.

११. तथा परमपुरुषार्थभूते ब्रह्मप्राप्तिलक्षणमोक्षेऽपि स्वरूपोच्छित्तिलक्षणः, अविद्यास्त-
मयलक्षणः निःशेषवैशेषिकात्मगुणोच्छेदलक्षणः कैवल्यरूपः, तद्भाव(साधर्म्य)लक्षणः^{२४},
तद्गुणसंक्रान्तिलक्षणः, तच्छायापत्तिलक्षणः, सांसिद्धिकानन्दादिस्वरूपाविर्भावलक्षणः,
तद्गुणानुभवजनितनिरतिशयसुखसमुन्मेषोपनीतात्यन्तिकतत्किङ्करत्वलक्षण इति तथा तथा
विवदन्ते ।

१२. तत्साधनतोऽपि कर्मयोगलभ्यः, ज्ञानयोगलभ्यः, अन्यतरानुगृहीतान्यतरलभ्यः,
उभयलभ्यः, उभयपरिकर्मितस्वान्तस्यैकान्तिकात्यन्तिकभक्तियोगलभ्य इति ।

11. Even in regard to the supreme goal of human endeavour, mokṣa, which consists in the realisation of Brahman, the several views maintained are—that it (mokṣa) consists in annihilation of one's self²⁴; that it is the destruction of ignorance,²⁵ that it is the state of aloofness resulting from the complete destruction of all the special qualities of the self²⁶; that it is a state of becoming one with Brahman²⁷; that it is the inflow of God's qualities²⁸; that it consists in attaining similarity with Brahman²⁹; that it is the fullest revelation of its (self's) intrinsic attributes of bliss and other qualities; that it is everlasting service to the Lord kindled by the heightened manifestation of unsurpassed bliss arising from the experience of His qualities and so on.

12. About the means of attaining mokṣa also, some contend that it is attainable by karma-yoga and some that it is realisable by jñāna-yoga; some contend that it is attainable by either of these (two) helped by the other³⁰; some assert that it is rendered effective by both³¹; some assert that to him whose mind is purified by both (karma and jñāna), it is realisable by bhakti-yoga which is ever-lasting and one-pointed.

24. Buddhism.

25. Advaita.

अविद्यास्तमयो मोक्षस्सा च बन्ध उदाहृतः

26. Nyāya-Vaiśeṣika.

27. Advaita.

अत्र यद्यपि कोशेषु साधर्म्यपदमस्ति, तथापि तदनुचितमिव; अवश्यवक्तव्यस्य ऐक्यलक्षण
मोक्षस्याकथनप्रसङ्गात् ॥

28. cf. Śiva-Saṅkrāntivāda.

29. cf. Śiva-sama-vāda.

30. Here one of the two is primary and the other secondary.

31. Here both are of equal importance. Jñānakarma-Samuccayavāda.

१३. तदेवमनवसितविशेषविमर्शकजनविमर्शनात् तत्तत्पक्षसाधनबलाबलानवगमाच्च ततस्ततः सन्दिहानाः प्रेक्षावन्तो न तावत् परमपुरुषार्थाय घटेरन्, यावदयमात्मा परमात्मा च स्वरूपतः प्रमाणतः संबन्धतः प्राप्तितः तत्साधनतश्च न निर्णीयेतेति तत्प्रतिबोधाय इदमारभ्यते । यद्यपि भगवता बादरायणेन इदमर्थान्येव सूत्राणि प्रणीतानि, विवृतानि च तानि परिमितगम्भीरभाषिणा भाष्यकृता, विस्तृतानि च तानि गम्भीरन्यायसागर-भाषिणा भगवता श्रीवत्साङ्कमिश्रेणापि, तथापि आचार्यटङ्कभर्तृप्रपञ्चभर्तृमित्रभर्तृहरि-ब्रह्मदत्तशङ्करश्रीवत्साङ्कभास्करादिविरचितसितासितविविधनिबन्धनश्रद्धाविप्रलब्धबुद्धयो न यथावदन्यथा च प्रतिपद्यन्त इति तत्प्रतिपत्तये च युक्तः प्रकरणप्रक्रमः ।

१४. तत्र

देहेन्द्रियमनःप्राणधीभ्योऽन्योऽनन्यसाधनः ।

नित्यो व्यापी^{३२} प्रतिक्षेत्रमात्मा भिन्नः स्वतः सुखी ॥

13. Noticing the conflicting views of inquirers who have not determined anything conclusively, not knowing the strength and weakness of the proofs of the respective views, and entertaining doubts therefrom, wise men will be unable to secure mokṣa so long as the individual self and the Supreme Self are not understood in respect of their nature, the means by which they are established, their relation (to each other), the attainment (of mokṣa by the individual self), and also of the means thereof. For this reason, this work is begun to make them known. The aphorisms (sūtras) having the same end in view were composed by the venerable Bādarāyaṇa; and these have been interpreted by the Bhāṣyakāra (Dramiḍācārya) whose exposition is concise and elegant; and they have been elaborately explained by the venerable Śrīvatsāṅka Mīśra who elegantly sets forth an ocean of rules of interpretation (nyāyas). Nevertheless, as persons whose understanding has been misled by faith in the various writings, good and bad, of such teachers as Ṭaṅka, Bhartṛprapaṇca, Bhartṛmitra, Bhartṛhari, Brahmadaṭṭa, Śaṅkara, Śrīvatsāṅka Mīśra, Bhāskara, etc., do not know things as they are and even understand them erroneously, the undertaking of this work is but proper for a right knowledge of things.

14. The view to be defended here is that the individual self is different from the body, the senses, manas, prāṇa and intellect; (it) does not depend on anything else (for its knowledge); (it) is eternal, subtle, distinct in each body, and in its essential nature blissful.

32. श्रीभाष्ये जिज्ञासाधिकरणे अहमर्थात्मत्वसमर्थननिगमनावसरे व्यापी=अतिसूक्ष्मतया सर्वचेतनान्तःप्रवेशस्वभाव इति व्याख्यातम् ।

१५. ननु देहमेवात्मानं प्रत्यक्षतः प्रतिपद्यामहे, अहं जानामीति ज्ञाता ह्यात्मा अहमिति चकास्ति, देहश्चाहङ्कारगोचरः स्थूलोऽहं कृशोऽहमिति दर्शनात्, देहस्य हि स्थौल्यादियोगः, अतस्तत्समानाधिकरणतया अयमहङ्कारश्शरीरालम्बन इत्यवश्याश्रयणीयम्, इतरथा सकल-लौकिकपरीक्षकव्यवहारोपरोधश्च; न चायं लाक्षणिको व्यवहारः मुख्यवृत्तिभूमेः पृथगसिद्धत्वात्। न चानेकावयवयोगिशरीरालम्बनत्वे ज्ञात्रवभासस्य तदीयरूपावयव-वाद्यवभासेनान्वयिना भवितव्यम्, येन तदन्वयाभावाज्जानामीति प्रत्ययः शरीरातिरिक्तमव-गमयेत्। बाह्येन्द्रियप्रत्यक्ष एव तथा नियमदर्शनात्, स्वान्तस्यान्तरगुणाधारतावभास एव सामर्थ्यनियमात्, अनवधृतावयवविशेषस्याप्यनेकावयवयोगिनो महिमगुणशालिनस्यैकस्य

THE CASE FOR THE IDENTITY OF SOUL AND BODY.

15. We perceive the body itself to be the soul. In the cognition 'I know', the ātman, who is indeed the knower, shines forth as the 'I'; and the body is the object of the consciousness of 'I', as is evident from the knowledge 'I am stout', 'I am lean'; in fact, stoutness and the like relate only to the body; hence, as the 'I' is put in apposition with 'lean', 'stout', etc., it must necessarily be admitted to have the body for its object. Otherwise, all usage, popular and learned, would be meaningless. It cannot be maintained that here (in statements like 'I am stout') the 'I' denotes the body by a figure of speech (lakṣaṇā), because there is no other place where it can possibly be said to have a primary significance.

Again, it cannot be said that if the consciousness of the 'I' as knower has for its object the body which consists of several parts, the knowledge of the body should be accompanied by a knowledge of its parts, colour, etc. If there were such a need, as the knowledge of bodily parts and colour does not appear, the cognition 'I know' would reveal the presence of something other than the body. Such a necessity (of the knowledge of parts and shapes accompanying the apprehension of an object) is found to exist only in the case of perception arising from the external senses. The capacity of the mind is restricted to the manifestation of the soul's character as being the seat of internal qualities. In fact, (even in the case of external perception) there is no necessity for the apprehension of number, magnitude, etc., because, though its parts are not comprehended, a triad of atoms consisting of many parts and possessing visible magnitude is admitted to be the minimum visible entity; and because air is known to be perceived by the sense of touch only as the seat of contact (and not as a whole consisting of parts). Just as, even when something other than the body is taken to be the

प्रथमप्रत्यक्षाभ्युपगमात्, वायोश्च त्वगिन्द्रियेण स्पर्शाधिष्ठानमात्रतयोपलम्भदर्शनाच्च न बाह्यप्रत्यक्षगोचर एव संख्यापरिमाणादिग्रहणनियमः ।^{३३} देहव्यतिरिक्तात्मगोचरत्वेऽपि यथा तत्र तदीयगुणान्तराग्रहणं तथेहापि । एवं च प्रत्येकं परमाणुषु चैतन्यानुपलब्धेः तदभ्युपगमे च एकशरीर एवानेकसहस्रचेतनापातात्, अकारणगुणपूर्वकस्य कार्यद्रव्यवर्तिनो विशेषगुणस्यासम्भवान्न शरीरविशेषगुणश्चैतन्यं, अयावच्छरीरभावित्वाच्च इत्यादयोऽनुमानभेदाः प्रत्यक्षबाधितविषयतया न पराक्रमितुं क्षमन्ते । विशेषगुणत्वे च प्रतिषिध्यमाने देहगुणत्वाभ्युपगमप्रसङ्गश्च । अपि च इच्छानुविधायिक्रियत्वेन्द्रियाश्रयत्वादयः^{३४} शरीरे दृश्यमानाः संप्रतिपन्नाचैतन्यात् घटादेरत्यन्तव्यावर्तमानाः शरीरमेव चेतनमवगमयन्ति ।

object of self-consciousness, there is no knowledge of its other qualities, here too (when the body is the object of self-consciousness, there is no knowledge of its parts and colours).

In each of the infinitesimal atoms consciousness is not met with ; and if it be accepted (that each super-sensible atom possesses consciousness), there will result belief in several thousands of intelligent beings in one and the same body ; and as the special quality of the effect cannot but be based on the quality of the cause, and as consciousness does not continue as long as the body lasts, consciousness cannot be a special quality of the body. These and other kinds of arguments based on reasoning are lacking in force, as they teach what is contradicted by direct perception. If it (consciousness) be denied to be a special quality, it will amount to its acceptance as a common quality of the body. Moreover, qualities such as the character of owning activities dependent on desires and of being the seat of the senses and the like, which appear in the body and not in such objects as pots, whose non-intelligent character is admitted on all hands, reveal that the body itself is the intelligent being.

33. कोशेषूपलभ्यमानः पाठो नातीव सुन्दरः । नियमस्य उच्यते वाद्यौ च व्यभिचारस्य पूर्वमेव प्रदर्शितत्वाज्जरहितः पाठो विरुद्धार्थको भाति । अतः ' अभ्युपगमात् ' ' दर्शनात् ' इति पञ्चम्यन्तद्वयस्य साध्यसाक्षाक्षस्य न बाह्यप्रत्यक्ष.....ग्रहणनियम इत्यन्त्रान्वयो युक्तः । बाह्यप्रत्यक्षविषयेऽप्येतादृशो नियमो न संभवति किमुतान्तरप्रत्यक्षविषय इति भावः ॥

34. यद्यप्यत्र कोशेषु पाठोऽन्यथोपलभ्यते, तथापि स न समीचीनो भाति । अत्र चेष्टेन्द्रियार्थाश्रयशरीरमिति न्यायसूत्रमभिप्रेतम् । तच्च लक्षणत्रयपरम् । आदिना अर्थाश्रयत्वस्य ग्रहणम् । प्रतिविधानावसरेऽपि इन्द्रियाश्रयत्वादिभ्यतिरेकहेतवः न साध्यमुपस्थापयितुमीशत इत्यनूदितम् ।

क्रमुकफलताम्बूलदलावयवादिषु प्रत्येकमविद्यमानस्यापि रागस्येवावयविनि संयोगविशेषात् देहारम्भकपरमाणुसंश्लेषविशेषादेव देहे चैतन्यस्याप्याविर्भावो नानुपपन्नः । चर्वणजनित-
हुतवहसंयोगसंपादितपाटलिमभिः परमाणुभिर्द्व्यणुकादिकमेण कारणपूर्वं एव तत्र रागोदय
इति चेन्न । प्रमाणाभावात्, अपि च सितासितादितन्तुषु प्रत्येकमविद्यमानमपि
चित्ररूपं विशेषगुणं तदारब्धे पटे स्फुटमुपलभमानाः कथं कारणगुणपूर्वकत्वमुक्तगुणस्याध्य-
वस्येम् । न चावयवरूपातिरेकेणावयविनि चित्रं नाम रूपान्तरं नास्त्येव । अवयविनो-
ऽचाक्षुषत्वप्रसङ्गात्, अवयवरूपैरेव तदुपपादने सर्वमेव कार्यद्रव्यं नीरूपमापद्येत, अनुभव-
विरोधः, सर्वव्यवहारविरोधश्च । विशेषगुणश्च काठिन्यं करकाद्रव्यवर्ति अकारणगुणपूर्वकं
दृश्यत इत्यनैकान्तश्च । न च संयोगविशेषः काठिन्यम् । तस्य द्विष्टत्वात्, अस्य तु
करकाद्रव्यैकवर्तित्वात्, स्पर्शविशेषतया पदार्थविद्विरभ्युपगमाच्च । दृश्यस्य देहस्य कथं

It is not improper to maintain that just as the red colour, which is absent in the parts of the areca nut and betel leaf severally, emerges on account of a particular combination of these in the whole, even so intelligence emerges in the body, only on account of a particular combination of infinitesimal atoms which give rise to it. There is no warrant for the objection that in the instance cited, from out of the infinitesimal atoms rendered red by the heat generated in the act of chewing (betel leaf and nut) in the order of binaries, etc., red colour emerges strictly only in conformity with the quality of the cause. Further, although the special quality of variegated colour is not found in white, black and other threads severally, we clearly perceive it in the cloth made out of these. How, then, can we assert that the quality of the effect is dependent on that of the cause ? Again, it cannot be said that over and above the colours of the constituent parts there is no other colour known as the variegated colour in the whole ; for, in that case, the whole would become imperceptible. If it be said that the whole becomes visible only on account of the colours of the parts, it would follow that all effects would be deprived of their colours. That would contradict experience as also all usage. As the special quality of hardness existing in ice is not found to be dependent on the quality of the causal substance (water), the argument commits the fallacy of *anaikānta*.

Again, hardness cannot be said to be a particular form of conjunction, because it exists in two objects, while hardness exists in one, namely, ice, and because people who know the nature of things have admitted hardness to be a form of contact. It may be asked how the body which is an object of perception can be regarded as the knower. What

द्रष्टृत्वमिति चेत्को विरोधः, अयमेव यदेकस्यां क्रियायामेकस्य कर्मत्वं कर्तृत्वं च न घटत इति । यद्येवं व्यतिरेकवादे वा कथमात्मन्यहमिति प्रत्ययः, रूपभेदादिति चेत्समानमिदं देहात्मवादेऽपि । अपि च परसमवायिक्रियाफलभागि कर्म, स्वसमवेतज्ञानफलभागिनः शरीरस्य कर्मत्वमेव नास्तीति न पर्यनुयोगावकाशः, अतो देह एवात्मेति बार्हस्पत्याः । तथा च पृथिव्यापस्तेजोवायुरिति तत्त्वानि तेभ्यश्चैतन्यं किण्वादिभ्यो मदशक्तिवदिति सूत्रम् ॥

१६. अत्र प्रतिविधिर्देहो नात्मा प्रत्यक्षबाधतः ।

न खल्वहमिदङ्कारावेकस्यैकत्र वस्तुनि ॥

अहं जानामीति प्रत्यग्वृत्तिरहमिति मतिः इदंकारगोचराच्छरीरान्निष्कृष्टमेव स्वविषय-मुपस्थापयति घटादेरिव । पराग्वृत्तिरिदमिति शरीरविषयिणी च शेमुषी स्वविषयमहङ्कारगोच-

is the contradiction involved in this? The incompatibility lies precisely here—in regard to one act, it is not possible for one and the same substance to be at once the object and the agent of action. If this were so, even on the other view (that something other than the body is the self), how can the self (the perceived) appear as the 'I' (the perceiver)? If it be replied that it is due to a difference of aspect, then it is equally applicable to the doctrine that the body is the self. Besides, an object (of knowledge, and, for that matter, of any activity) is that which shares the fruits of actions which are found in intimate association with something other than itself; but the body experiences the results of knowledge found intimately associated with itself and hence does not possess the character of being an object. Hence there is no room for the objection (How can the body be both the subject and object?). Therefore, the followers of Brhaspati hold that the body itself is the soul. To that effect their sūtra runs—intelligence emerges from the elements of earth, water, fire and air, just as the intoxicating quality springs from herbs, etc.

THE REFUTATION OF THIS (DOCTRINE)

16. The body cannot be the soul, because (the doctrine of the identity of the body with the soul is) contradicted by perception. One and the same substance cannot appear as 'this' and 'I' to an identical person. Just as the inward knowledge of 'I' involved in the consciousness 'I know' exhibits its object to be distinct from pots and the like, it reveals its object to be distinct from the body which is the object of the consciousness 'this'. Just as the cognition 'This is a pot' (marks off its object to be distinct from the object of the consciousness of 'I'),

राद्विवेचयति यथायंघट इति । इतरथा स्वपरविभागानुपपत्तेः । नचैकस्मिन्नेव रूपभेदा-
देवं प्रतीतिः । नहि देवदत्तो दण्डिनमात्मानं दण्डयतिमिति प्रत्येति । अन्यच्च निय-
मितबहिरिन्द्रियवृत्तेरवहितमनसोऽहमिति स्वात्मानमवयतः करचरणोदराद्यवयवा न भासन्ते ।
स्थवीयसि चावयविनि शरीरेऽहमिति मतिगोचरेऽभ्युपगम्यमाने अवश्यमवयवप्रतिभासेना-
प्यन्वयिना भाव्यम् । नह्यस्ति संभवः—अवयवी स्थवीयान् प्रचकास्ति, अवयवास्तु
न केचन प्रथन्त इति । यत्तु त्र्यणुके व्यभिचार इति । तन्न । वातायनविवरदृश्यनि-
र्भागत्रसरेणुव्यतिरेकेण परमाणुस्वीकारे कारणाभावात् । प्रत्यक्षयोग्यावयवस्य तथा प्रति-
भासनियमाद्वा न व्यभिचारः । न चावयविनि बहिरिन्द्रियग्राह्य एवायं नियम इत्युत्प्रेक्ष्यम् ।
प्रमाणाभावात् । अन्तःकरणस्य च केवलस्यावयविनि वृत्त्यसंभवाच्च । वायोस्तु
रूपाद्यभावात् केवलस्पर्शाधारतयोपलम्भः । तत्रापि तादृशानेकावयवप्रतिभासोऽस्त्येव

even so the outward knowledge 'this' having the body for its object, distinguishes its object to be distinct from the object of self-consciousness. Otherwise, there will be no basis for the distinction between 'myself' and 'others'. It cannot be urged that one and the same thing may, from different aspects, appear in this manner (as 'I' and 'this'), because Devadatta wielding a stick does not understand himself as 'This person possesses a stick' (but only as 'I wield a stick'). Moreover, to a person who has controlled the activities of his external senses and attained mental concentration and known the self as the 'I', the knowledge of organs such as hands, legs and belly does not arise. And if the body which is big and possesses parts were taken to be the object of self-consciousness, a knowledge of the organs must necessarily accompany it. It is impossible for the body which is big and which owns parts to be known when none of its parts is cognised. The instance of the tryanuka (triad of atoms) which was cited as disproving the general proposition (that whenever the whole is perceived its parts also should be perceived) does not really disprove it, for there is no warrant for accepting the existence of infinitesimal atoms over and above the triads which are devoid of parts and which are perceivable (in sun's rays proceeding) through the hole of the window. (Even granting the existence of infinitesimal atoms) this general proposition is not falsified, because it applies only to perceptible parts. Again, it cannot be contended that this law obtains only in the case of the complex whole cognised by external organs, as there is no warrant (for the same). Besides, in comprehending a whole composed of parts the internal organ, in itself, does not operate. As for the case of air, it is known as the seat of touch only, because it has no colour, etc. ; besides, even here, as in the case of the

स्पृश्यमान इव घटादाविति न तेन व्यभिचारः । यत्तु स्थूलोऽहं कृशोऽहमिति शरीरेऽहं प्रत्ययो दृश्यत इति । तदपि पर्यालोचनीयम् । तत्राप्यन्तःशरीरमहङ्कारमेव किमपि वस्त्वहङ्कारो गोचरयति, न पुनश्चाक्षुष इव देहप्रत्ययः स्थौल्यबाल्यादियोगिदेहमात्रम् । अत एव ममेदं गृहमितिवन्ममेदं शरीरमिति भेदप्रतिभासो व्यवहारश्च । नह्यसौ साक्षात्प्रतीत-भेदनिमित्तः प्रतीयमानः शिलापुत्रकशरीरव्यपदेशवदौपचारिको युक्त आश्रयितुं ममात्मेति-वत् । तत्रास्मच्छब्दस्य आत्मनि वृत्तेरैकार्थ्यादविवादाच्च युक्तं तथाश्रयणम् । न चैवमत्र । अतो देहव्यतिरेकिणश्चेतनस्य प्रत्यक्षसिद्धत्वात् तत्संबन्धिनि लाक्षणिको देहेऽहंशब्दप्र-योगः । बाह्यविषयेषु परस्परविरुद्धरूपपरिमाणसङ्ख्यासन्निवेशग्रहणेन व्यतिरेकस्य स्फुटत्वादात्मनि तादृशरूपान्तराग्रहणेन देहाभेदप्रतिभासोऽविवेकिनाम् । इतश्च इच्छानुविधायिस्वव्यापारोऽयमात्मा, इच्छयैव हि सङ्कल्पयति स्मरत्यूहितं च, शरीरमपि

pot which is being touched, there is knowledge of such diverse parts ; hence, no discredit to the general law on this score. The contention that from statements such as ' I am stout ', ' I am lean ', the self is found to have the body for its object deserves examination. Even there, self-consciousness has for its object some entity which is only inside the body ; and like the knowledge of the body, gained through visual perception, it does not relate to the body only which has the characteristics of stoutness, youthfulness and the like. Hence the apprehension of difference and the usage ' This is my body ', as in the case of the expression ' This is my house '. This usage (' This is my body ') being based on directly perceived difference, it is not proper to urge that it has to be interpreted figuratively like the expression ' This is my self ', ' This is the body of the doll '. As the word ' my ' denotes the self and as the two words (my and self in the statement ' This is my self ') have an identical meaning and as there is no dispute concerning this, a figurative interpretation is proper. But it is not so here (in the statement ' This is my body '). Because a conscious entity distinct from the body is established by perception, the word ' I ' (in the proposition ' I am stout ') denotes by a figure of speech, the body which is related to the self. With regard to external objects, as there is knowledge of mutually exclusive colours, size, number and configuration, diversity is explicit ; but, in the case of the soul, as there is no knowledge of such divergent qualities, to the ignorant there arises the illusion of the body being non-different from the soul. Again, the self has his activities determined by his desires, for, he wills, remembers and infers only at the instance of his desires ; the body too has its activities, such as lying down, sitting and standing, determined by his desires ; hence arises the illusion of

तदिच्छानुविधायिशयनासनोत्थानादिचेष्टमिति भवत्यभेदभ्रमः शुक्तिरजतादाविव । प्रणिहितमनसस्तु ज्ञातृतया सिद्धयन्तमहमाकारमर्थमनवयवमिदमिति परिस्फुरतः स्थूलादवयविनश्शरीरात्पृथगपरोक्षयन्त्येव । भवन्ति च जानामीति प्रत्ययः शरीरविषयो न भवति, अर्थान्तरविषयो वायम् ; अप्रकाशमानतदवयवप्रतिभासत्वात् । य एवं प्रकारः स तत्रा, यथा अयमिति प्रतिभासः । यच्छरीरविषयं न तत्तथा । यथा उभयसंमतं शरीरज्ञानम् । तथा शरीरं अहंप्रत्ययगोचरो न भवति इदमिति गृह्यमाणत्वात् बाह्येन्द्रियग्राह्यत्वाद्वा घटादिवदिति । किञ्च—

अपरार्थं स्वमात्मानमात्मार्थेऽन्यच्च जानतः ।

सङ्घातत्वात्परार्थेऽस्मिन्देहे कथमिवात्मग्रीः ॥

सर्वस्य बाह्याभ्यन्तरभोग्यवर्गस्य शब्दसुखादेरात्मार्थतां भोक्तुश्चात्मनोऽनन्यार्थतां सर्वस्य शेषितां प्रत्यक्षतः प्रतिपद्यामहे । न च शरीरमनन्यार्थं सङ्घातत्वात् । सङ्घाता हि सर्वे परार्था दृष्टाश्शयनासनरथादयः । न च संघाताः संहतशरीराद्यर्था दृश्यन्त इत्यात्मनो-

non-difference as in the case of the shell and silver. Thinking minds, however, perceive the entity known as 'I' which has to be recognised as knower and which is devoid of parts to be really distinct from the body which appears as 'this' and which is stout and consists of parts. As the knowledge of bodily parts is absent in the consciousness 'I know', either it does not have for its object the body or has for its object something other than the body. Wherever there is absence of apprehension of bodily parts, the body is not the object of knowledge, but something else, as in the case of the consciousness 'This is a pot'. The knowledge which has the body for its object is, however, different (that is, there is not absence of knowledge of parts of the body), as in the instance of knowledge of the body accepted by both of us. Again, the body cannot be the object of self-consciousness, because it is known to be 'this' or because it is grasped by external senses, as in the case of the pot, and the like. Moreover, how can he who has known his self to exist for the sake of nothing other than himself, and known other objects to exist for his sake, take this body which exists for the sake of others, for the reason of its being a collection of parts, to be the self? We directly perceive that the entire collection of internal and external objects of experience, such as sound and pleasure, exists for the sake of the self; while the self, the enjoyer, does not exist for the sake of others, but is the one object for whose glory and service everything else exists. Being a collection, the body cannot but exist for the sake of others; and all aggregates such as bed, seat and chariot are indeed found to

ऽपि संहतत्वमापद्यत इति वाच्यम् । तथा सति तस्यापि परार्थत्वप्रसंगात् । अपरार्थश्चायमात्मा प्रत्यक्षतः प्रकाशत इत्युक्तम् । योग्यानुपलंभवाधितं चात्मनि संघातत्वम् । संघातान्तरार्थत्वे च तस्यापि तथा ततोऽन्यस्यापि तथेति न व्यवतिष्ठेत । न च व्यवस्थायां सत्यामव्यवस्था युक्ता । न च सङ्घातस्य परार्थत्वे परस्य संहतत्वमपि प्रयोजकम् । भोक्तृत्यैवात्मनः स्वार्थसंघातं प्रति परत्वोपपत्तेः । व्याप्त्यनुपयोगिनोऽपि दृष्टान्तदृष्टधर्ममात्रस्यानुरोधेनानुमानमिच्छतः सर्वानुमानोच्छेदप्रसङ्गः ॥

अस्फुटत्वेऽपि भेदस्य शरीरे तदसम्भवात् ।

तद्गुणान्तरवैधर्म्यादपि ज्ञानं न तद्गुणः ॥

सर्व एव कार्यद्रव्यगतविशेषगुणः कारणगुणपूर्वक इति कथमतत्पूर्वकः शरीरे चैतन्यगुणः संभवेत् । यत्तु बार्हस्पत्यं वचनं “ पृथिव्यापस्तेजो वायुरिति तत्त्वानि तेभ्यश्चैतन्यं किण्वादिभ्यो मदशक्तिवत् ” इति । तदनुपपन्नम् । शक्तेरविशेषगुणत्वेन तथोपपत्तेः ।

exist for the sake of others. It cannot be argued that as all collections are known to be for the sake of the body and the like which are themselves collections, the self also should be an aggregate ; for, if it were so, the self too would have to exist for the sake of others ; but it has already been stated that the self is directly perceived to exist not for the sake of others. On account of the non-perception of the collective nature of the self—a nature which is capable of being perceived—the belief that the soul is an aggregate stands condemned. If the self exists for the sake of another collection, the latter must also exist for the sake of some other collection and that for another and so on *ad infinitum*. But where an end is possible, an unending chain is undesirable. Moreover, when a collection exists for the sake of something else, it is not because that other is itself a collection. It is only in virtue of his nature as enjoyer that the self becomes that other for whose sake all collections exist. For him who attempts to base his inference on all the qualities of the illustrative example, even though they may be unserviceable to the general law, all inference would be impossible.

Even though the distinction between the two (the body and the self) may not be explicit, consciousness cannot be a quality of the body, as it cannot exist in it and as being quite unlike its other qualities. As all the special qualities existing in the effect are dependent on those of the causal substance, how can consciousness exist in the body without depending on the quality of its cause. Brhaspati's teaching—that earth, water, fire and air are the realities and that from these consciousness arises just as the intoxicating quality emerges from herbs, etc.—is un-

सर्वद्रव्येषु तत्तत्कार्यसमधिगम्यः तत्प्रतियोगिशक्त्याख्यो गुणस्साधारणः । नैवं चैतन्यम् देहैकगुणत्वाभ्युपगमात् कार्यत्वे सत्येकविधप्रत्यक्षसिद्धतया च विशेषगुणत्वात् । द्रव्यान्तरसंयोगसमासादितमदशक्तिभिरकार्यभूतैः परमाणुभिर्निजगुणपुरस्कारेण स्वकार्य-द्रव्येषु मदशक्त्युत्पादोऽपि नानुपपन्नः । ताम्बूलरागस्तु पूर्वद्रव्यावयवविभागानन्तरं द्रव्यान्तरसंयोगजनितरक्तिमगुणैः कारणैः क्रियते । दृश्यते हि तत्रावयवेष्वपि प्रत्येकं रक्तिमगुणः । न च शरीरावयवेषु प्रत्येकं चैतन्यगुणः प्रज्ञायते प्रतिज्ञायते वा । तदुपगमे च एकशरीर एवानेकचेतनापातादङ्गाङ्गित्वाभावः प्रतिसंधानव्यवहारलोपश्च देवदत्तदृष्ट इव यज्ञदत्तादेः । यत्तु अकारणगुणपूर्वकं चित्ररूपं पट इति । तन्न । नानारूपता हि चित्रता । सा च नानारूपैस्तन्तुभिः क्रियत इति किमनुपपन्नम् ।

tenable. As power is not a special quality, it may be so (that is, need not be dependent on the quality of the causal substance). In all substances the quality known as causal power concerning the effect, cognisable from their respective effects, is a common quality ; but consciousness is not so, because it is admitted to belong to the body only and because it is a special quality, as it, while remaining an effect, is cognised by one form of perception. It is not wrong to maintain that, on the basis of their own quality, from out of infinitesimal atoms, which are not effects and which acquire the intoxicating quality from the mingling of different substances, the intoxicating quality arises in their effects.

The redness caused by betels, etc., is, likewise, produced by causes which possess the red colour generated by the mixing of different substances, after their parts have lost their cohesion (in the act of chewing); hence the red colour perceived in each of their parts too. Consciousness is not found in the parts of the body individually, nor have they been said to possess it. If that were admitted, as it would follow that in one and the same body there must be many thinking beings, it is impossible to say which is primary and which is secondary ; besides, all reference to recognition would be impossible. Just as in respect of what has been seen by Devadatta, there cannot be recognition on the part of Yajñadatta, here also (what has been perceived by one part of the body cannot be recognised by another). The statement made before, namely, that the variegated colour found in the cloth is not dependent on the quality of the cause, is erroneous. The quality of variegated colour is nothing but that of being many coloured ; and this (variegated colour) is produced by threads of different colours ; hence there is nothing objectionable here. Though the variegated colour

प्रत्येकमविद्यमानमपि तच्चित्ररूपं तन्तुषु संहतेषु दृश्यत एव चित्रा इमे तन्तव इति ॥ सम्भूय च तेषां पटारम्भकत्वम् । एवं तत्कारणेष्वपि तदिति न कचिद्व्यभिचारः । नचैकरूपनियमाभावेनावयविनोऽचाक्षुषत्वम् । महत्त्वैकार्थसमवायिना रूपवत्त्वेनैव चाक्षुषत्वसिद्धेः । अस्तु वा चित्रं नाम एको रूपविशेषः । स तु रूपैरेव कारणगतैर्नानाविधैरारभ्यत इति दृष्टम् । नचैवमवयववर्तिभिरेव चैतन्यैरवयविनि शरीरे चैतन्यविशेषारम्भः । चित्तितन्मात्रस्यैव तेष्वसम्भवात् । अतो न देहगुणश्चैतन्यम् । एतेन सुखादयोऽपि शरीरगुणाः प्रत्युक्ताः । अपिच दृढ एव शरीरे विरोधिगुणावातमन्तरेण कुसुमविलेपनगंध इव निवर्तमानश्चैतन्यसुखादिर्न तद्गुणो भवितुमर्हति । न खलु तद्विशेषगुणा रूपादयस्तथा निवर्तन्ते ॥

आत्मनः परेषां च शरीरगुणाः प्रत्यक्षयोग्याः बाह्येन्द्रियग्राह्याश्च । न च तथा ज्ञानादिरिति नासौ तद्गुणः । किञ्च—

does not exist in each of the threads severally, it is certainly noticed in the threads which combine and are known as threads of variegated colours. The capacity to produce cloth belongs to threads only in their togetherness ; thus, the variegated colour exists even in the cause of cloth ; hence there is nowhere any violation (to the rule that the qualities of the effect are dependent on those of the causes). It cannot be maintained that the whole (the cloth) becomes invisible inasmuch as it does not possess any one specific colour, for, it may become perceptible by the very fact of its possessing inherently colour along with bigness. Let variegated colour be taken to be one specific colour. Even then it is found to be produced by the different colours existing in the causes. It cannot be asserted that it is only the consciousness resident in the parts that produces the particular consciousness in the body, which is composed of those parts, for, consciousness in general cannot exist in the parts. Therefore, consciousness is not a quality of the body. On the same count, the belief that pleasure and other qualities belong to the body stands condemned. Besides, as consciousness, pleasure, etc., vanish from the body, like the smell of flower and sandal, even when the body continues to be strong and in the absence of counteracting qualities, they cannot be the qualities of the body. Colour and other special qualities of the body, however, do not leave it in the same manner.

The qualities of the body are perceptible to us as well as to others and are also to be grasped by external senses ; but not so consciousness, etc. Therefore, they are not the qualities of the body. Further, the

University Notes

OUR CHANCELLOR.

On the retirement of His Excellency the Right Hon'ble Lieutenant-Colonel Sir George Frederic Stanley, P.C., G. C. I. E., C. M. G., in November 1934, His Excellency Lord Erskine, G. C. I. E., who succeeded to the Governorship became our Chancellor. Sir George Stanley was taking a very keen interest in this University since its inception and we are sure that the same kindness and solicitude will be extended to us by our new Chancellor.

OUR PRO-CHANCELLOR.

After leading a deputation of the Indian Community of Burma to the Secretary of State for India with conspicuous success our Pro-Chancellor has returned to our midst. We are confident that his experiences in Europe and America will be of great value to us and to those institutions with which he is associated.

OUR VICE-CHANCELLOR.

Dewan Bahadur S. E. Runganadhan, M.A., I.E.S., retired on April 28, 1935, having completed two terms as the first Vice-Chancellor of this University.

Dr. S. N. Chakravarthi, M.Sc., D.Phil. (Oxon), acted as Vice-Chancellor from that date to the 26th June when the Right Hon'ble V. S. Srinivasa Sastri, P.C., C.H., took charge as permanent Vice-Chancellor.

We take this opportunity to congratulate Dr. Chakravarthi on his appointment as acting Vice-Chancellor, and to welcome into our midst the Right Hon'ble V. S. Srinivasa Sastri, P.C., C.H., our new Vice-Chancellor.

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STAFF.

We congratulate Mr. C. S. Srinivasachariar, Professor of History and a member of our Editorial Board, on the conferment on him of the title of Rao Sahib by the Government of India.

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The Syndicate has awarded a Fellowship to Mr. T. S. Raghavan, M.A., Lecturer in Botany for higher studies to be prosecuted in the King's College, London.

A text book in Tamil on Acoustics by Mr. R. K. Visvanathan, M.A., Lecturer in Physics, has been accepted for publication by the Syndicate.

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The judges specially appointed for the purpose have adjudged that the Tamil Text Book in Chemistry by "Susruta Dasan" is worthy of the prize of Rs. 1,000. We understand that "Susruta Dasan" is no other than Mr. N. Ananthavaidyanathan, M.A., Lecturer in Chemistry.

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Mr. K. Rama Pisharoti, M.A., Professor of Sanskrit has been appointed member of a Committee to improve and equip the Devanagari Script.

The following candidates have been declared eligible for the degrees of Master of Science and Master of Literature :

M.Sc.

<i>Name of candidate.</i>	<i>Title of Thesis.</i>
1. K. Rangaswami, B.A. (HONS.)	On the Theory of normals to a Quadric in n . dimensions.
2. P. S. Varadachari, B.A. (HONS.)	Diamagnetism of liquid mixtures at different temperatures.
3. M. Swaminathan, B.A.	Synthetical experiments in the group of alkaloids.
4. K. Ganapathi, B.A.	Synthetical experiments in the group of alkaloids and the chemical investigation of some Indian medicinal plants.

M.LITT.

1. V. Sivaraman, B.A. (HONS.)	Factory labour in the Madras Presidency.
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LECTURES.

Prof. Dr. Karel Hujer of the University of Prague, Czechkoslovakia, visited our University and delivered a lecture on 'Astrophysics', under the auspices of the University Mathematics Association.

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CONGRESSES AND CONFERENCES.

The Syndicate has nominated the Right Hon'ble V. S. Srinivasa Sastri, our Vice-Chancellor, as a delegate of the University to the Quinquennial Congress of Universities of the Empire to be held at Cambridge, in July 1936.

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Professor C. S. Srinivasachariar attended as a delegate of the University, the All-India Modern History Congress held at Poona. last June.

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Mr. L. K. Govindarajulu, B.A., B.L., Director of Physical Education, presided over the Provincial Health and Physical Education Conference held in Madras last April.

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SUMMER SCHOOL OF PHYSICAL EDUCATION

A summer school of Physical Education was conducted in the month of May under the auspices of the University. More than a hundred teachers belonging to the schools in the neighbouring districts took advantage of the course. We congratulate Mr. L. K. Govindarajulu, B.A., B.L., Director of Physical Education, his assistants and Mr. T. P. Navaneethakrishna on their success in this new venture.

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OURSELVES.

As an experimental measure we will be publishing three issues of the University Journal this year, one in each term in the months of August, November and March.

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DEWAN BAHADUR S. E. RUNGANADHAN.

On the 28th of April 1935 Dewan Bahadur S. E. Runganadhan laid down the reins of office having been the first Vice-Chancellor of the Annamalai University from June 1929 onwards when the new University began to function. His career as our Vice-Chancellor set the crown on his labours in the cause of education in South India for about a quarter of a century.

Born in 1878 of middle class Indian Christian parents he had a brilliant career as a student being placed in the First Class in his B.A., M.A. and L.T. examinations. After he had completed his studies in the Madras University he proceeded to Scotland where he spent two years in higher studies. He entered the Educational Service in 1907 as Assistant Professor of English in the Presidency College, Madras. From

this position in course of time, he rose to be Junior Professor of English, then Additional Professor and finally Acting Chief Professor.

For about twenty-two continuous years—except for a brief interval of three years—he was one of the most outstanding personalities in the educational world of Madras. To thousands of young men who were privileged to sit at his feet in the Presidency College his name became synonymous with all that was high and noble in University studies. Meticulous in his dress, polished in his manners, perfect in his enunciation of English, he seemed to be the embodiment of the best type of gentleman that the Universities could place before the young men of the time. Perhaps no teacher in recent years did more than Professor Runganadhan to enable Indian students to appreciate the rhythm and beauty of the English language.

During his years of work in the Presidency College he was interested in every aspect of University education. For many years he was Chairman of the Board of Studies and of the Board of Examiners in English and member of the Syndicate of the University. He was an Officer of the Madras University Training Corps and Secretary of the Inter-Collegiate Athletic Association, Madras. He was Warden of the Victoria Hostel for ten years (1920-29). No wonder that Mr. Runganadhan was one of the most popular and universally respected of the professors in the Presidency College. He was with the students not only within the narrow limits of the class room but he took every opportunity of getting into intimate contact with them whether it be in the sports-field or on the parade ground or on the thousand and one occasions when the resident warden of a hostel meets his wards in the dining hall or in the residential quarters. In 1928 the Syndicate of the Madras University chose Professor Runganadhan to lead the General University Inspection Commission; this he did with conspicuous success. The service on the Commission must have been of special value to him not merely because he could meet again many of those with whom he had worked in the Academic Council, Senate or Syndicate of the University but because it enabled him to renew his contacts with many of his old students actively engaged in various spheres of useful activity not least of them being that of higher education. To him it was more an educational pilgrimage, a triumphal progress rather than a formal visit of inspection. Above all it gave him intimate and first hand knowledge of all higher educational activities which came under the control of the Madras University. Administrative experience he had already gained by his three years' work (1916-19) as the First Principal of the Ceded Districts College, Anantapur. In April 1929 Government posted him as the Principal of the Government College, Kumbakonam, and his long connection with the Presidency College ceased. But

destiny had already marked him for higher things and within a few weeks he was called to be the first Vice-Chancellor of the new University which had just been started in the Tamil Nad, thanks to the munificence of Dr. Rajah Sir Annamalai Chettiar, Rajah of Chettinad.

The student world in South India hailed with satisfaction the appointment of Mr. Runganadhan as Vice-Chancellor of the Annamalai University. Well might they do so ; for here was a man who knew them and whom they knew. For twenty-five years gradually and patiently he had been building up an experience which was to be of immense use in his great task of launching and getting under way a new residential, teaching and unitary University in the heart of the Tamil Nad. The University was to devote itself both to teaching and to research especially the study of South Indian history and culture and technology. Barely eight years ago the Sri Meenakshi College which formed the nucleus of the new University had been started ; and the veteran educationist that he was Mr. Runganadhan knew one has to make haste slowly if progress is to be steady and certain. As he conceived it a University should have a background of culture, an academic atmosphere, before specialised work can commence. The foundations of advanced research should be well and truly laid on a sound school of teaching and study which could challenge comparison with other institutions elsewhere. To the students who enter the portals of the University a sound education of the mind and body should be possible. What the country needed was not mere book-worms, nor quill-drivers chained to the desk but leaders of thought and action who would bring nearer the new India of our dreams ; men who could work together as a team, men who could forget individual rights for the sake of national liberties, men who could stand united not caring for the differences of caste, creed and religion. Rightly therefore he laid stress on the undergraduate's activities in the playgrounds and on his social life outside the class room.

Some measure of his achievements on the academic side we can have if we recollect that the new Vice-Chancellor had to begin from the very beginning : from the length and breadth of India a staff had to be collected who could be expected to do the work, the departments of study had to be organised, the University bodies had to be constituted and, last but not least, new courses of study had to be considered, sifted and put into workable shape. These by themselves would be sufficient labour for a man's hands ; but Mr. Runganadhan did not stop there. He worked incessantly for securing recognition of the infant University and its degrees within the country and abroad. For six years he represented it on the Inter-University Board, attended the Universities' Conferences at Delhi in 1929 and 1934 as a delegate and went abroad as the representative of the University to the Congress of the Universities of

the Empire at Edinburgh in 1931. Besides, the duties of the Vice-Chancellor on the administrative side were onerous indeed. He had not only to build up new lecture halls, laboratories and libraries but he had to devote his attention to the housing of the staff, to roads, to water-supply and in short to undertake all the duties of the Chief Officer of a Corporation. During his regime as Vice-Chancellor, a huge building programme has been pushed through, roads laid, an electric supply instituted and gardens, parks and playgrounds have sprung up everywhere. His work in the University was recognised by Government when they conferred on him first the title of 'Rao Bahadur' and later of 'Dewan Bahadur'.

No one who has been in any way connected with the University during the past six years can ever forget the tall and military figure, the smiling face and genial personality of Mr. Runganadhan. Long service under Government had taught him the value of tact and patience and no one who entered his presence ever went away without feeling that he had been face to face with a good, kind and lovable man. We cannot conclude this sketch better than by quoting the closing words of the address that was presented to him by the members of the University staff on the eve of his retirement :—

“ Of soul sincere,
In action faithful, and in honour clear ;
Who broke no promise, served no private end,
Who sought no title, and who lost no friend.”

* * * * *

RT. HON'BLE V. S. SRINIVASA SASTRI, P.C., C.H., LL.D.

The Rt. Hon'ble V. S. Srinivasa Sastri took charge of the office of Vice-Chancellor on the 26th June, 1935. It is not possible for us to give an adequate sketch of the wide and varied activities of this eminent son of India. We attempt here only to trace in bare outline the main events of his distinguished career.

Born on the 22nd September 1869, Mr. Sastriar gave early proofs of his genius at School and College : he passed his Matriculation before his 15th year and took his degree before the 19th. Invariably he was found to be at the top ; nor did he win place or distinction by confining his attention to the narrow sphere of his studies, but devoted himself to games and athletics. It is said that he excelled in tennis and even more in a ready command of choice English which was later to cause surprise even to the most gifted of Englishmen. He entered life as a teacher and continued as such for about twenty years. Even now when one listens to his clear analysis, cogent reasoning and inimitable pre-

sentation of ideas, one can well realise how fortunate his students must have been in having a teacher of such keen intelligence and oratorical skill. The work of educating he has always loved : in fact, his whole life has been devoted to the task of educating his countrymen, to pause and consider all sides of a question before arriving at a decision, to be patient and tolerant and to place always Society above self ; of educating Government into the realisation that the strength and greatness of a state lie in the prosperity and contentment of the people ; of educating the nations of the world into the recognition that the mild Hindu is the repository of a culture second to none in the world and is possessed of an intellect which can rise to any height when the need arises. Recognising in Gokhale a kindred spirit he joined the Servants of India Society in 1907, thereby pledging himself to a life of voluntary poverty to be spent in the increasing service of his motherland and to follow a career which would lead to no official positions or favours. Service of Society, not a thought for self, has indeed been the motto of his life. From the very first he was the trusted friend and lieutenant of Gokhale ; and when Gokhale died unexpectedly in 1915 the mantle of leadership of the Society fell on the shoulders of Mr. Sastriar. He was elected to the Senate of the Madras University in 1910 and continued there for ten years. Both there as well as in the Madras Legislative Council—to which he was nominated three years later—as in his earlier life as Headmaster of the Hindu High School, Triplicane, he has rendered yeoman service to the cause of education in this Presidency. In 1916 he was elected to the Imperial Legislative Council and for the next five years he worked in close association with the Congress in the cause of Home Rule and Social Reform. In 1919 he proceeded to England as a member of the Moderate Deputation and gave evidence before the Parliamentary Select Committee. Next year he was elected to the Council of State. He was closely associated with Mr. Montague during his visit to India in 1918.

By this time his selfless service for the country, his mastery of the spoken word and his personal charm and magnetism had won for him a place in the front rank of Indian politicians and he was selected by Government to represent India at the Imperial Conference in 1921. Mr. Sastriar had for long pleaded with pen and tongue the cause of Indian self-government and the need for recognising India as a free and equal partner in the British Commonwealth of Nations. During this Conference he made English and Colonial Statesmen realise the strength of his case and the Imperial Conference recognised the claim of Indians to citizenship in South Africa and in other Dominions while reserving the right of each Dominion to fix the character of its population according to its wishes. Nothing contributed to raise the prestige of India in

the eyes of the world more than the work of Mr. Sastriar in England. In recognition of his services to the Empire he was appointed by His Majesty as a member of the Privy Council and the City of London conferred its freedom on the distinguished visitor. In the course of the same year, he was called upon to represent India in the second Assembly of the League of Nations and in the Disarmament Conference at Washington. When he returned to India next year, at the request of Dominion Premiers, he was deputed by the Government of India to tour the Dominions and plead the cause of Indians domiciled in those countries. People in those distant lands realised for the first time to what height Indians could rise ; and as ambassador of Empire, Mr. Sastriar showed the highest qualities of statesmanship which in a country like England would have brought their possessor to the highest position in the state. Soon after his return from this mission he was invited by the Calcutta University to deliver the Kamala Lectures 'On the Rights and Duties of an Indian Citizen'. In the recent past we know how he was the soul and brain of the Habibullah Deputation to South Africa and how as a result of that mission he was chosen to be the first Agent-General of the Indian Government in South Africa. For two years (1927-29) he adorned this place with distinction and founded the now famous Sastri College. Even when he returned to India owing to an impaired health he was called to the membership of the Royal Commission on Labour. The distinction of C.H. was conferred on him in 1930. His work in the second Round Table Conference and his contribution towards making an All-India Federation possible are too well known to be recounted. During years of labour as educationist, orator, statesman and social reformer, he has held aloft the banner of selfless service and has earned for himself the name of a true servant of India. Once again at the call to service he has come forward from his retirement and fortunate indeed are those to whom it is given to share in his labours.

With a vast fund of experience culled from many fields and many climes and a wisdom that has been gained by years of loving labour he comes again to dedicate his services to the Temple of Learning. In his new surroundings the noise and dust of political controversy are exchanged for quiet work among a chosen band of intelligent workers from whom he is assured of support and appreciation. Speaking to the staff assembled to welcome him, the new Vice-Chancellor told his hearers that on them depended 'how long and to what purpose he was going to be in their midst'. May we assure him that the staff of this University will stand always loyally by him, giving of their best to the institution, so that, under Providence, his days may be many in our midst and the labour of his hands fruitful and that the institution which is his to mould and strengthen may become great among the great seats of learning in this sacred land of India.

Reviews

Chaucer—Troilus and Criseyde: Abridged and Edited by R. C. Goffin. (Oxford University Press.)

Mr. Goffin has done a distinct service to the students of Chaucer in bringing out this abridged edition of Chaucer's long narrative poem. Especially for the beginner who first attempts to read Chaucer, the length of *Troilus and Criseyde* seems to be the most formidable obstacle. Hence we know that for every hundred students who read Chaucer's *Canterbury Tales* there are scarcely five who would willingly plod through all the five books of the poem containing in all more than 8200 lines.

Of all the works of Chaucer, the text of *Troilus and Criseyde* was perhaps the most difficult to determine. This work of determining the correct text has been done by more than one editor—Skeat, Robinson, Root and by Sir W. S. McCormick in the Globe edition of Chaucer edited by A. W. Pollard. The last mentioned editor has spared no trouble in collating all the different manuscripts (more than twenty in number) and has given us the most authentic text of the poem. Mr. Goffin, however, admits that "the text followed in this abridged edition is that of Skeat, a text which still remains, on the whole, the most practical available." We do not know on what grounds Mr. Goffin calls the text of Skeat "the most practical available". Skeat, though a great scholar and the first to give us the complete Chaucer, has been superseded in the matter of textual accuracy by later editors like McCormick and Root. Mr. Goffin might well have followed the text of these later editors.

In other respects the edition is admirable. Though the poem suffers by abridgement we recognise that no editor could satisfy the preferences and exclusions of all the admirers of the poem. We find some of the excellent stanzas of descriptive beauty in Books III and IV cut out in the abridgement, but evidently in an edition of this kind it could not be helped. The abridgement serves one purpose admirably; it tells the story excellently without many gaps in the narrative, and this is the principal merit of the text. Those who have used Mr. Sisam's editions of Middle English Texts in teaching students will find this edition one more valuable addition to that series on the same model. We are sure that this edition will be welcomed by all teachers of Chaucer who would like to prescribe a work of his other than the *Canterbury Tales*. The introduction is very helpful to the student and the notes are exhaustive enough for him to understand the textual allusions and synonyms.

M. S. S.

International Intellectual Co-operation 1934. Published by the League of Nations International Institute of Intellectual Co-operation, 2 Rue de Montpensier, Paris (Palais-Royal), 1935, pp. 228.

This book is a review and a summary of the work done under the auspices of the Institute in the direction of International Intellectual Co-operation. Proceeding on the dictum of Paul Valéry that 'a League of Nations implies a league of minds' the central idea of intellectual co-operation is defined as the promotion in all spheres which come within its range of a co-ordination of effort and a collaboration capable, not merely of saving time and facilitating information, distribution and progress, but also of promoting the creation, gradually perhaps but none the less certainly, of the international outlook.

The most vital question of the day is the preservation of international peace; especially now, when Italy's bellicose attitude to Abyssinia is about to precipitate a first class European crisis. The prestige of the League seems to hang by a slender thread with Italy threatening to leave the League while Britain and France look on helplessly; and hence this publication is of special interest to us now (Aug. 1935). It is no doubt true that imperfect and incorrect knowledge is the parent of many ills and that the high road to international peace lies in the education of the people. The aim of International Intellectual Co-operation is therefore the promotion of 'collaboration between nations in all fields of intellectual effort in order to foster a spirit of international understanding as a means to the preservation of Peace!'

After defining the scope and purpose of intellectual co-operation an account is given of the work of the year 1934. Questions concerning international relations, general questions of international co-operation, questions regarding education, the natural sciences, literature, libraries, fine arts, folk arts and intellectual rights were considered. Some of the topics chosen for discussion are 'Future of European Thought and Culture', 'Art and the State', 'Collective Security', 'The Cinema and Educational Life', 'The Teaching of History', 'Educational Broadcasting', 'Co-ordination of Scientific Bibliographies' and 'Library Planning and Equipment'. The book concludes with documents embodying the names of office-bearers and representatives in the various organisations for intellectual co-operation and an excellent index.

A. C. S.

ACKNOWLEDGMENTS

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